

Contract Documents and Specifications
For
Kansas Abandoned Mine Land Program

HWY 400 DAM STABILIZATION PROJECT KS-0552

**NE NE NW of Section 20, Township 31 South, Range 24 East on the U.S.G.S
Cherokee, Kansas
CHEROKEE COUNTY, KANSAS**



**SAM BROWNBACK, GOVERNOR
DR. ROBERT MOSER, SECRETARY OF HEALTH AND ENVIRONMENT
JOHN MITCHELL, DIRECTOR OF ENVIRONMENT
GARY BLACKBURN, DIRECTOR, BUREAU OF ENVIRONMENTAL REMEDIATION**

Kansas Department of Health & Environment
Bureau of Environmental Remediation
Surface Mining Section
4033 Parkview Drive
Frontenac, Kansas 66763
(620) 231-8540

**BRUTUS MARSH MITIGATION PROJECT
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NOTICE TO BIDDERS

STATE OF KANSAS

CONSTRUCTION PROJECT QUOTATION NO. EVT0001931

A. Announcement of Request for Bids

The Secretary, Department of Administration, announces the request that bids be submitted for the following construction project:

KDHE Surface Mining Section
Hwy 400 Dam Reclamation Project
Cherokee County, Kansas

B Receiving, Public Opening and Reading of Bids

Sealed bids will be received by the Office of the Director, Division of Purchases, Department of Administration, Suite 600, 800 S.W. Jackson Street, Topeka, Kansas 66612 until 2 :00 p.m., on January 25, 2013, and will be at that time and place publicly opened and read aloud.

C Obtaining Bid Forms and Construction Documents

Copies of the Form of Bid, Form of Contract, Instructions to Bidders and Construction Documents (includes Drawings and Specifications) may be obtained by interested Bidders upon receipt of their verbal or written request as follows:

Write, call or visit: KDHE Surface Mining Section
4033 Parkview Dr.
Frontenac, Kansas 66763
Phone: (620) 231-8540
FAX: (620) 231-0753

D. Obtaining Information for Bidders

- a. Questions concerning the Insurances, Form of Contract, and Bonds should be addressed to the Division of Purchases, Department of Administration, Suite 600, 800 S.W. Jackson Street, Topeka, Kansas 66612; Phone: (785) 296-2376.
- b. Questions concerning the Form of Bid, Instruction to Bidders, and Construction Documents (Plans and Specifications) should be addressed to the KDHE Surface Mining Section.

NOTICE TO BIDDERS

E. Pre-Bid Conference

A public pre-bid conference will be held at _____ 10:00 a.m., on January 8, 2013 _____, for the purpose of clarifying any questions or comments pertaining to the plans and specifications. The conference will be held in the SMS office at 4033 Parkview Drive, Frontenac, Kansas, followed by a visit to the site. Attendance at both the conference and the visit to the site is **mandatory** for bidder qualification. Minutes and responses to questions asked at the pre-bid conference will be issued as an Addendum.

F. SMS Contract Award Recommendation Conditions

1. A Contract will be awarded to the lowest responsible Bidder meeting Conditions and Specifications imposed in the call for Bids. The Director, Division of Purchases reserves the right to accept any or all Bids or to reject any or all Bids for sufficient reason(s) and to waive all technicalities if deemed to be in the best interest of the State of Kansas.
2. **Failure on the part of the apparent lowest responsible Bidder to provide a completed Applicant Violator System (AVS) AML Contractor Information Form to the KDHE Surface Mining Section within five (5) working days of being advised that they are the successful Bidder, and/or the successful Bidder being listed on the AVS as a violator, may result in the withdrawal of the award, re-awarding to the next lowest Bidder or rebidding the Contract and forfeiture of all or part of the Bid Guarantee.**
3. A "Notice to Proceed" will be issued by the SMS when the Contract, Bonds, Appointment of Process Agent form (if applicable) and Insurance Documents have been executed by all parties, accepted by the Division of Purchases, and conditions required to be addressed at the SMS's Pre-Construction Meeting have been met.

END OF NOTICE TO BIDDERS DOCUMENT

INSTRUCTION TO BIDDERS

STATE OF KANSAS

CONSTRUCTION PROJECT QUOTATION NO. EVT000

1. Method of Bidding and Awarding

- a. Bids must be submitted on the "Form of Bid" issued with each set of Contract Bid and Construction Documents.
- b. A single unit price Contract will be awarded for the "Project as a whole". In general, the work involves, but is not limited to: site preparation; excavation and grading; soil replacement installation of riprap, revegetation; and general construction.

Note: Kansas Statute KSA 75-3471 as amended requires each Bidder to list and identify the "Major Subcontractors" as part of the Bid when a single Contract for the "Project as a whole" is to be awarded.

2. Bidder Qualifications

Any or all Bidders may be required by the Director, Division of Purchases to furnish information to support the Bidder's capability to comply with conditions for bidding and to fulfill the Contract if awarded the Contract. Such information may include, but not be limited to, the following:

1. Proof of registration with the Kansas Director of Taxation by Non-resident Bidders.
2. Proof of registration with the Kansas Secretary of State by foreign corporations.
3. List of projects of similar size and type the Bidder has constructed or in which the Bidder has been engaged in a responsible capacity.
4. Evidence the Bidder maintains a permanent place of business.
5. A current financial statement.
6. Contractor's Compliance Report and Plan of Action in accordance with provisions of the Kansas Act Against Discrimination.
7. Evidence of the Bidder's ability to field the proper equipment required to execute the work within the time frame stipulated.

3. Examination of Documents

- a. Before submitting a Bid, each Bidder shall carefully examine all Contract Bid and Construction Documents pertaining to the Work and must visit the location of the Work to verify conditions under which the Work will be performed. Submission of a Bid will be considered presumptive evidence the Bidder is conversant with local facilities and difficulties, requirements of the Documents and pertinent State and/or local codes and the state of labor and material markets and they have made due allowances in their Bid for all contingencies.
- b. Include in Bid all costs for labor, materials, equipment, fees, taxes, insurances and other contingencies, with overhead and profit, as necessary to produce a complete installation of Work specified under headings covered by the Bid (including all trades specified) without further cost to the Surface Mining Section (SMS).

4. Project Documents

The Project Documents consist of the following items:

1. Notice to Bidders
2. Instructions to Bidders
3. Form of Bid
4. General Conditions of the Contract
5. D.O.I – Certification Regarding Debarment, Suspension, and Other Responsibility Matters
6. Construction Contract
7. AVS AML Contractor Information Form
8. Specifications and the Drawings listed in Section 01010, Item 1.3
9. Addenda to Drawings and/or Specifications, duly issued

5. Interpretation of Project Documents

- a. Should a Bidder find discrepancies in or omissions from the Specifications/Drawings or if there is doubt as to their meaning, the Bidder shall advise the SMS at once.
- b. Requests for interpretations of the Contract Bid and Construction Documents shall be presented to the SMS in writing at least seven (7) days prior to the date on which Bids are to be opened.
- c. Interpretations of the Contract Bid and Construction Documents will be made by Addenda issued to all known persons having same. The SMS or the Division of Purchases will be responsible for any explanation or interpretation of the Contract Bid and Construction Documents.

INSTRUCTION TO BIDDERS

- d. Receipt of Addenda shall be acknowledged on the Form of Bid and, upon execution of the Contract, they will become a part of the agreement.

6. Bid and Performance Guarantee

- a. Each Bid submitted in connection with this Project shall be accompanied by a Certified Check, Cashier's Check or Bid Bond in the amount of five percent (5%) of the Base Bid, payable without condition to the State of Kansas.
- b. The Bid Bond shall be accompanied by a Power of Attorney showing the authority of the person executing the Bond on behalf of the surety company and should be approved by the Director, Division of Purchases prior to opening of Bids.
- c. An Annual Bid Bond on file with the Director, Division of Purchases, may be acceptable for this transaction providing it is equal to or greater than five percent (5%) of the Base Bid and is payable without condition to the State of Kansas. This Bond must be accompanied by a Power of Attorney showing the Authority of the person executing the Bond on behalf of the Surety Company.

Note: Use of an annual Bid Bond must be approved by the Director, Division of Purchases a minimum of five (5) days prior to the opening of Bids. The Director of Purchases may disapprove the use of an annual Bid Bond if said Bond is being used as a Bid guarantee on more than one (1) Project at the same time.

- d. In the event of an award, the responsible Bidder submitting the lowest Bid price will be required to enter into a Contract and to furnish a Performance Bond and a Public Works Bond for the full amount of the Contract. Failure to do so shall cause a forfeiture of the full amount of the Bid Guarantee.
- e. Bond forms will be provided by the Division of Purchases and must be executed with a surety company licensed to do business in the State of Kansas.
- f. Bid Guarantees will be returned to unsuccessful Bidders when the successful Bidder is determined and a Contract executed. The Bid Guarantee of the successful Bidder will be returned when the Contract, required Bonds and Insurances are furnished and accepted. Bid Guarantees submitted in the form of a Certified Check will be returned on a State of Kansas Warrant.

7. Preparation and Submission of Bid

- a. Each Bid shall be made on the Form of Bid (Document C) accompanying these Instructions. All blank spaces on the Form of Bid shall be filled in. Quote unit prices and unit amounts as requested.

INSTRUCTION TO BIDDERS

- b. Bid shall not contain recapitulation of Work to be done.
- c. Bid shall be presented under sealed cover, plainly marked with title of Project, Project number, name of institution and location.
- d. Bid must be received by the Director, Division of Purchases not later than the scheduled closing time. Late Bids will be returned unopened. **Bids in excess of \$25,000 will not be accepted by FAX.**

8. Signing Form of Bid

- a. Bids which are not signed by the individuals making them shall have attached to them a Power of Attorney evidencing authority to sign the Bid in the name of the person for whom it is signed.
- b. Bids which are signed for co-partnerships shall be signed by all of the co-partners or by an attorney-in-fact. If signed by an attorney-in-fact, there shall be attached to the Bid a Power of Attorney evidencing authority to sign the Bid.
- c. Bids which are signed for corporations shall have the correct corporate name signed in handwriting or in typewriting and the signature of the President or other authorized Office of the corporation shall be manually written below the written corporate name, above the words "BY (SIGNATURE)". If such a Bid is manually signed by an official other than the President of the corporation, a Resolution of the Board of Directors evidencing the authority of the official to sign the Bid shall be attached.
- d. If Bids are signed for any other legal entity, the authority of the person signing for the legal entity shall be attached to the Bid.

9. Subcontracts

Bidders must submit the names and addresses of the major Subcontractors for the Project as identified on the Form of Bid. If awarded a Contract for the Project, the names of the Subcontractors shall be subject to approval by the SMS.

10. Telegraphic Modification of Bid

A Bidder may modify a Bid by telegraphic communication at any time prior to the scheduled closing time for receipt of Bids, provided such telegraphic communication is received by the Director, Division of Purchases prior to the Bid closing time and further provided the Director is satisfied a written confirmation of the telegraphic modification over the signature for the Bidder was mailed prior to the closing time. Consideration cannot be given to telegraphic modifications without compliance with these conditions.

11. Public Bid Opening

- a. On the date and at the hour scheduled for closing, the Director, Division of Purchases or an authorized representative will open and read the Bids publicly for interested Bidders or others who may be present.
- b. Information obtained at public Bid openings is preliminary only and it shall not be construed the apparent low Bidder has met all conditions and specifications of the Bid.

12. Withdrawal of Bids

Any Bidder may withdraw a Bid at any time prior to the scheduled closing time for receipt of Bids, but after the scheduled closing time for receipt of Bids, no Bid may be withdrawn for a period of thirty (30) calendar days.

13. Award of Contract

- a. A Contract will be awarded to the lowest responsible Bidder meeting Conditions and Specifications imposed in the call for Bids. The Director, Division of Purchases reserves the right to accept any or all Bids or to reject any or all Bids for sufficient reason(s) and to waive all technicalities if deemed to be in the best interest of the State of Kansas.
- b. At the time of award, the Division of Purchases will provide the successful Bidder with the Contract forms, the Performance Bond and Public Works Bond forms and Appointment of Process Agent form, if applicable, accompanied by instructions for execution, and will also request submission of proof of certain Insurance coverages.
- c. The executed Contract, Bonds and Insurance Documents, as well as a receipt for filing the Public Works Bond with the Clerk of the District Court in the county where the Work is to be performed, must be returned to and received by the Division of Purchases within fifteen (15) working days.
- d. Failure on the part of the Contractor to provide the executed Documents within fifteen (15) working days may result in the withdrawal of the award, re-awarding to the next lowest Bidder or rebidding the Contract and forfeiture of all or part of the Bid Guarantee.
- e. Failure on the part of the apparent lowest responsible Bidder to provide a completed Applicant Violator System (AVS) AML Contractor Information Form to the KDHE Surface Mining Section within five (5) working days after the Bid due date, and/or the successful Bidder being listed on the AVS as a violator, may result in the withdrawal of the award, re-awarding to the next lowest Bidder, or rebidding the Contract, along with forfeiture of all or part of the Bid Guarantee.

INSTRUCTION TO BIDDERS

14. Notice to Proceed

A "Notice to Proceed" will be issued by the SMS when the Contract, Bonds, Appointment of Process Agent form (if applicable) and Insurance Documents have been executed by all parties and accepted by the Division of Purchases.

15. Change Orders

Changes to the initial Contract are to be recommended by the SMS with the approval of the Department, and the Director, Division of Accounts and Reports.

16. Laws and Regulations

All applicable laws of the State of Kansas, municipal ordinances and rules and regulations of all authorities having jurisdiction over construction of this Project shall apply to any Contract resulting from a Bid on this Project as though herein written out in full.

17. Certificate of Project Completion

Upon satisfactory completion of the Contract, a formal Certificate of Project Completion will be forwarded to the Contractor by the SMS. The date of completion of the Project will be the starting date of the guarantee period.

18. Project Guarantee

The date of the Certificate of Project Completion shall be the starting date for the guarantee/warranty period which is for one (1) year.

END OF INSTRUCTIONS TO BIDDERS DOCUMENT

STATE OF KANSAS
CONSTRUCTION PROJECT QUOTATION NO. EVT0001931

Submitted By:

Name of Company (*please print or type*)

Attach Certified or Cashier's Check here if furnished in lieu of a Bid Bond

Submitted To:

Director
Department of Administration
Division of Purchases
900 SW Jackson Street, Room 652S
Topeka, Kansas 66612

Submitted For:

KS Dept. of Health & Environment
Surface Mining Section
Abandoned Mine Land Program
Hwy 400 Dam Stabilization Project
Cherokee County, Kansas

Sir:

In response to your Notice to Bidders and in compliance with the Instructions to Bidders, the undersigned herewith submits their offer to provide all labor, materials, equipment, tools of trade and labor, accessories, appliances, warranties and guarantees and to pay all royalties, fees, permits, licenses and applicable taxes necessary to complete the following construction work:

Base Bid

Bidder agrees to clear and grub; excavate and grade; install rock and drainage structures, revegetation; and perform all other work associated with these activities for the Hwy 400 Dam Stabilization Project, Cherokee County, Kansas, as indicated on the drawings and specified herein, at the lump sum and unit prices for work in place for the items of work set forth on the Schedule of Items for a total Base Bid of:

_____ Dollars (\$_____).

Notes and Limitations

1. The base bid quote will be used to evaluate the bids.
2. All listed quantities are estimated. No warranty is given, either expressed or implied, as to the accuracy of the quantity estimate. Bidders shall use the estimated quantities at their own risk.
3. The Contractor shall be required to achieve the grades shown on the Drawings. The final quantity of materials to be handled on the project could be more or less than indicated in the Form of Bid as the actual soil shrinkage factor will vary depending on Contractor=s equipment and methods of construction.
4. All extensions of the unit prices shown will be subject to verification by the Surface Mining Section (SMS). In case of variation between the unit price and the extension, the unit price will be considered to be the bid.
5. Award will, in general, be made as a whole to one Contractor.
6. Bidders are required to bid on all items.
7. Bidders must inspect the site where services are to be performed.
8. All lump sum quotes will be used as the unit of bidding for these items. The unit price listed below each Lump Sum bid is a breakdown of the Lump Sum bid showing the estimated quantities. These unit prices shall apply to any Change Order directed by the SMS unless otherwise negotiated between the Contractor and the SMS. Bidder shall be responsible for verifying quantities on all bid items.

Time of Substantial Completion

The undersigned agrees to have the Work of the Project ready for final inspection by the SMS on or before 365 days, following the written Notice to Proceed. Failure to meet this deadline may result in liquidated damage penalties being assessed.

Addenda

Receipt of any Addenda, whether issued by either the KDHE – SMS or the Department of Administration – Division of Purchasing, shall be acknowledged below, and on any forms provided by the Department of Administration – Division of Purchasing, and, upon execution of the Contract, they will become part of the agreement.

#1)._____ #2)._____ #3)._____ #4)._____ #5)._____

State Tax

The undersigned attests this Bidder is not in arrears in taxes due the State of Kansas.

The undersigned understands all materials and equipment purchased in the State of Kansas by the Contractor to be used, consumed and/or installed under the terms of a Contract resulting from this Bid are **not exempt** from payment of the Kansas Retailer's Sales Tax. The cost of said tax has been **included** in all Bid prices.

Note: A State Construction Project subject to State Sales Tax is also subject to payment of a locally (city/county) levied Sales Tax.

Federal Tax

The undersigned has included in all quoted prices the cost of Federal Excise Tax on all items of construction and equipment subject to said tax.

SCHEDULE OF ITEMS

This Bid covers all materials and labor required for the HWY 400 DAM STABILIZATION PROJECT that includes work at site KS-0552. To be responsive, the Bidder must bid on all Bid Items on the BID SCHEDULE. The contract will be awarded on the basis of the **TOTAL BASE BID FOR THE PROJECT**.

For **Unit Price** items, the Unit Amount is the Unit Price multiplied by the Estimated Number of units given. In case of variation between the unit price and the extension, the unit price will be considered to be the bid. The sum of the Unit Amounts for each item constitutes the Unit Price item BID AMOUNT.

Some of the **Lump Sum** items have unit prices to be bid for the items. The unit prices bid with Lump Sum bid items shall only be used for change orders adding or deducting to the contract. The Unit Amount with the Lump Sum items is for the Owner's information only. Only those amounts shown in the BID AMOUNT will be considered for bidding purposes for the TOTAL BASE BID FOR THE PROJECT.

The Lump Sum price for mobilization and demobilization shall not exceed seven percent (7%) of the base bid.

The following abbreviations are used in the schedule:

LS = lump sum
cy = cubic yard
lb = pound
sy = square yard

ea = each
lf = lineal foot
ton = ton
for lime: ton = ton of 100% ECC

FORM OF BID

SUB-SCHEDULE - SITE KS-0552

<u>Item</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Estimated Units</u>	<u>Unit Amount</u>	<u>Bid Amount</u>
1. Mobilization & Demobilization	LS				\$ _____
2. Site Clearing & Preparation (estimated 1.0 acres)	LS				\$ _____
3. Earthwork (estimated 600 cy)	LS				\$ _____
4. Mulch – Earthwork (estimated 2 acres)	ton	\$ _____	8	\$ _____	\$ _____
5. Neutralization Lime (estimated 5 ton per ac.)	ton	\$ _____	10	\$ _____	\$ _____
6. KDOT 24” Light Riprap	ton	\$ _____	2,350	\$ _____	\$ _____
6. KDOT 18” Light Riprap	ton	\$ _____	15	\$ _____	\$ _____
7. 6” Aggregate Ditch Lining	ton	\$ _____	60	\$ _____	\$ _____
8. AB-3 (Roadstone 4” thick)	ton	\$ _____	200	\$ _____	\$ _____
9. Erosion Control Mat	sy	\$ _____	1,200	\$ _____	\$ _____
10. Silt Fence	lf	\$ _____	200	\$ _____	\$ _____
11. Hay Bale Dikes	lf	\$ _____	200	\$ _____	\$ _____
12. Biodegradable Sediments Logs	lf	\$ _____	200	\$ _____	\$ _____
13. Temporary Mulch (@ 2 tons/acre)	ton	\$ _____	4	\$ _____	\$ _____
14. Temporary Seeding	acre	\$ _____	2	\$ _____	\$ _____
15. Seeding (Fescue mix)	acre	\$ _____	2	\$ _____	\$ _____
16. Mulching (@ 2 tons/acre)	ton	\$ _____	4	\$ _____	\$ _____
17. Lime - Seeding (@ 2 tons/acre)	ton	\$ _____	4	\$ _____	\$ _____
18. Nitrogen	lb	\$ _____	150	\$ _____	\$ _____
19. Phosphate	lb	\$ _____	60	\$ _____	\$ _____
20. Potash	lb	\$ _____	120	\$ _____	\$ _____

TOTAL BASE BID FOR SITE KS-0552: \$ _____

Agreements

The undersigned agrees to the following KDHE-SMS terms and conditions:

1. The SMS reserves the right to accept or reject any or all Unit Prices.
2. Contractor has reviewed all Permits secured by the SMS and understands all terms, conditions, fees, monitoring requirements and special conditions of each Permit.

Declarations

The undersigned hereby declare they have carefully examined the Drawings and Specifications, have visited the actual location of the Work, have satisfied themselves as to all conditions and understand that, in signing this Form of Bid, they waive all right to plead any misunderstanding regarding same and agree to be bound by the provisions of said Drawings and Specifications and all statements made therein.

Signature and Seal

Dated This _____ Day Of _____, 20_____

Legal Name of Person, Firm or Corporation

Mailing Address for the above

(If Bid is submitted
by a Corporation,
affix seal here.)

By (Signature)

_____/_____
Telephone Number / Federal Employers I.D. Number

Bidder's Contracting Identification Number

To help facilitate the Awarding of Contract and subsequent payment(s) processes, the Bidder gives the FEIN (Federal Employers Identification Number) or the SSN (Social Security Number) planned for use when making application for partial or full work compensation. (Use space provided above.)

Major Subcontractors List

The following firms are identified by the Bidder as major subcontractors for this Project.

[illegible]

END OF FORM OF BID

**GENERAL CONDITIONS
ARTICLE INDEX**

1. Contract Documents
2. Definitions
3. Additional Instructions & Drawings
4. Shop Drawings
5. Materials & Workmanship
6. "Or Equal" Clause
7. Patents & Royalties
8. Surveys, Permits & Regulations
9. Sales Tax
10. Contractor's Obligations & Superintendence
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13. Inspection & Testing of Materials
14. Reports, Records & Data
15. Changes in the Work
16. Extras
17. Time for Completion
18. Correction of Work
19. Subsurface Conditions Found Different
20. Right of Owner to Terminate Contract
21. Subcontracts
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23. Construction Schedule and Reports
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25. Withholding of Payments
26. Acceptance of Final Payment as Release
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29. Substitute Bonds
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36. Required Provisions Deemed Inserted
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38. Safety
39. Indemnification
40. Kansas Acts Against Discrimination
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42. General Guarantee
43. Arbitration, Damages and Warranties
44. Insurance
45. Liquidated Damages
46. Assignment of Antitrust Causes of Action
47. Optional Performance and Payment Guarantee
48. Substantial Completion
49. Final Inspection and Acceptance
50. Overtime Work
51. Legal Addresses
52. Underground Installations

53. Inspection of Construction
54. Site Investigation and Conditions Affecting the Work

1. CONTRACT DOCUMENTS

- A. The Contract Documents, enumerated in the Table of Contents of this Project Manual shall form a part of this Contract and the provisions thereof shall be as binding upon the parties hereto as if they were fully set forth.
- B. The organization of the Specifications into divisions, sections and articles, and the arrangement of Drawings shall not control the Contractor in dividing the work among Subcontractors or in establishing the extent of work to be performed by any trade.
- C. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all. The intention of the documents is to include all labor, materials and equipment necessary for the proper execution of the work.

2. DEFINITIONS

The following terms as used in this Contract are respectively defined as follows:

- A. Contract Documents consist of the Notice to Bidders, Instruction to Bidders, Bid Form, Contractor's Performance Bond, Contractor's Public works Bond to the State, the Contract, General Conditions, Supplemental General Conditions, Specifications, Drawings, maps, plats, etc. prepared or furnished by the Architect/Engineer or the Owner, and Addenda, including additions and/or modifications therein incorporated before the execution of the Contract. Contract Documents shall also include Change Orders and written interpretations by the Architect/Engineer or the Owner which are made after execution of the Contract.
- B. Contract: The agreement between the Contractor and the Owner covering the work to be done.
- C. Owner, Contractor, Architect/Engineer, are those mentioned as such in the Contract Documents. They are treated throughout the Contract Documents as if each were of singular number and masculine gender.
 - 1) The Owner is the Department of Health and Environment, representing the State of Kansas with whom the agreement with the Contractor is executed.
 - 2) The Contractor is a person, firm or corporation with whom the Contract is made by the Owner.
 - 3) The term Architect/Engineer refers to the Project Architect/Engineer employed by the Owner for professional services in accordance with K.S.A. 75-1258, 75-1259 and 75-1260 or any designee of the Owner who is vested with the authority and responsibility to act as Architect/Engineer for this Project.

- D. The Department of Health and Environment is an agency of the State of Kansas.
- E. The Secretary is the head of the Department of Health and Environment.
- F. The Construction Representative is an employee of the Department of Health and Environment, Surface Mining Section who has the authority to act on behalf of the Owner in matters relating to the prosecution of the work and its installation in accordance with the Contract Documents.
- G. The Contractor's Superintendent is the Contractor's chief representative at the project site or related work area.
- H. A Subcontractor is a person, firm or corporation supplying labor and materials, or labor only, for work at the Site of the Project, for and under separate contract or agreement with the Contractor.
- I. Surety: Approved surety bound with and for the Contractor to insure his acceptable performance of the Contract and for his payment of all obligations under the Contract.
- J. The term "work" includes all labor necessary to complete the construction required by the Contract Documents for this Contract, and all materials and equipment incorporated or to be incorporated in such construction.
- K. The term "provide" shall be interpreted to mean, "furnish and install in place".
- L. As directed, rejected, approved, and other words of similar meaning which authorize any exercise of judgment, shall be distinctly understood to mean that such power to direct, reject, and approve shall be vested only in the Architect/Engineer and the Owner.
- M. Wherever the word "plan" is used, the word "drawing" may be substituted, and vice versa.
- N. Substantial Completion: The date of Substantial Completion of the Project or specified area is the date certified by the Architect/Engineer and the Owner when the construction is sufficiently completed, in accordance with the Contract Documents, as modified by any change orders agreed to by the parties, so that the Owner may occupy the project or specified area of the project for the use for which it was intended. The date of substantial completion shall be the beginning date for guaranty and warranty periods for all equipment and construction in place and operable at the time of substantial completion.

3. ADDITIONAL INSTRUCTIONS AND DRAWINGS

The Contractor will be furnished additional instructions and detail drawings by the Architect/Engineer or the Owner as necessary to carry out the intent of the work included in the Contract. The additional drawings and instructions thus supplied will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof. The Contractor shall carry out the work in accordance with the additional detail drawings and instructions.

4. SHOP DRAWINGS

- A. Shop drawings shall consist of drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are prepared by the Contractor or any Subcontractor, manufacturer, supplier or distributor, and which illustrate some portion of the work.
 - 1) All shop drawing submittals shall be accompanied by a transmittal letter identifying the Project and listing each item being submitted. Each item submitted shall be identified by reference to specification number and/or drawing sheet numbers.
 - 2) The Contractor shall make all shop drawing submittals to the Architect/Engineer. Any submittals made directly to the Architect/Engineer from Subcontractors or suppliers will be returned without review by the Architect/Engineer. The Contractor shall submit to the Architect/Engineer for approval three (3) copies of shop drawings consisting of drawings, diagrams, illustrations, schedules, etc. which are prepared by the Contractor or his Subcontractors. The Contractor shall make any corrections required by the Architect/Engineer and shall resubmit three (3) copies.
- B. The Contractor shall review shop drawings and shall submit same with reasonable promptness and in orderly sequence so as to cause no delay in the work or in the work of any Contractor. The Contractor shall inform the Architect/Engineer in writing of any deviation in the shop drawings from the requirements of the Contract Documents.
- C. By submitting shop drawings, the Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials, catalog numbers, and similar data, and that he has checked and coordinated each shop drawing with the requirements of the work and of the Contract Documents.
- D. The Architect/Engineer will review and approve shop drawings with reasonable promptness so as to cause no delay, but only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Architect/Engineer's approval of a separate item shall not indicate approval of an assembly in which the item functions, nor shall the Architect/Engineer's approval relieve the Contractor from responsibility for errors or omissions in shop drawings.
- E. The Contractor shall make any corrections required by the Architect/Engineer and shall resubmit the required number of corrected copies of shop drawings until approved. Resubmittal items shall be identified as such on the items and the transmittal letter.
- F. The Contractor shall direct specific attention in writing on resubmitted shop drawings to revisions other than the corrections requested by the Architect/Engineer on

previous submissions. Corrections or changes indicated on shop drawings shall not be considered an extra work order.

- G. No work requiring a shop drawing submission shall be commenced until the submission has been approved by the Architect/Engineer. All such work shall be in accordance with approved shop drawings.
- H. The Contractor shall keep on the site of the work, an approved or confirmed copy of the shop drawings and Specifications, and shall at all times give the Owner access thereto.
- I. All drawings for any one Contract should be numbered consecutively and shall bear the name and location of the project, the name of the Contractor, the date of the drawing, and the date of each correction or revision.

5. MATERIALS AND WORKMANSHIP

- A. The Contractor shall perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, necessary to complete all the work required by this Contract, within the time specified, in accordance with the provisions of the Contract Documents.
- B. Unless otherwise specified, all equipment, materials, and articles incorporated in the work covered by this Contract shall be new, and both workmanship and materials shall be of the best grade of their respective kinds. The Contractor shall, if required, furnish satisfactory evidence as to kind and quality of materials. The Contractor shall furnish to the Architect/Engineer or the Owner for his review the name of the manufacturer of machinery, mechanical and other equipment, which he contemplates installing, together with their performance capacities and other pertinent information.
- C. If not otherwise provided, materials or work called for in this Contract shall be furnished and performed in accordance with best established practice and standards recognized by Architects, Engineers and the Trade.
- D. In order that ready availability of materials, parts, or components for repair, replacement, or expansion may be assured, all such materials, parts and components shall be obtained where feasible from sources which maintain a regular, domestic stock.
- E. Reference to "Standard" specifications of any association or manufacturer, or codes of State authorities, intends the most recent printed edition or catalog in effect on the date which corresponds with date of the Contract Documents.
- F. Whenever reference is made in the Specification that work shall be "performed", "applied", "installed", "finished", "tested", or "connected", in accordance with the "manufacturer's directions or instructions", the Contractor to whom those instructions are directed shall furnish printed copies of such instructions when requested by the Architect/Engineer or the Owner before execution of the work.

6. "OR EQUAL" CLAUSE

- A. Whenever a material, article or piece of equipment is identified on the Drawings or in the Specifications by reference to manufacturers' or vendors' name, trade name, catalog number, etc., it is intended merely to establish a standard; and any material, article, or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article or equipment so proposed is, in the opinion of the Architect/Engineer or the Owner, of equal substance and function. **It shall not be purchased or installed by the Contractor without the Architect/Engineer's or the Owner's written approval.**
- B. It is the intent of these Specifications to permit the use of materials of any manufacturer so long as they are fully consistent, in the opinion of the Architect/Engineer or the Owner, with the quality and performance requirements for the Project. It shall be understood that named material or equipment (including manufacturer, brand, model, type, etc.) has been used to indicate the quality level which is required by the design. Materials or equipment items of other manufacturer may be used only upon the following conditions.
 - 1) That, in the opinion of the Architect/Engineer or the Owner, the proposed material or equipment item is fully equal (in design, materials, construction, workmanship, performance, finish, physical size, etc.) to the named item. **No compromise to lower quality level, however small, is acceptable.**
 - 2) That in substituting materials or equipment, Contractor assumes responsibility for any changes in system or for modifications required in adjacent or related work to accommodate such substitution, despite the Architect/Engineer or the Owner's approval and all costs growing out of the approval of "or equal" items shall be the responsibility of the Contractor. None of the extra costs resulting from such approval shall be the responsibility of the Owner, the Architect/Engineer or other Contractors.
 - 3) It shall be understood that the use of materials or equipment other than those specified, or approved equal by the Architect/Engineer or the Owner shall constitute a violation of contract, and that the Architect/Engineer or the Owner shall have the right to require the removal of such materials or equipment and their replacement with the specified materials or equipment at the Contractor's expense.
- C. No request for approval of "or equal" materials will be entertained except from the Contractor under whose jurisdiction the work in question is to be provided.

7. PATENTS AND ROYALTIES

- A. The Contractor shall hold and save the Owner and the Architect/Engineer and their officers, agents, and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or

appliance manufactured or used in the performance of the Contract, including its use by the Owner, unless otherwise specifically stipulated in the Contract Documents.

- B. The Contractor shall pay all license or royalty fees required by a patent that are necessary in order to complete the project as called for in the Contract Documents.
- C. If the Contractor uses any design, device or material covered by letters, patent or copyright, they shall provide for such use by suitable agreement with the Owner of such patented or copyrighted design, device or material. It is mutually agreed and understood, that, without exception, the Contract prices shall include all royalties or costs arising from the use of such design, device or materials, in any way involved in the work. The Contractor and his Sureties shall indemnify and save harmless the Owner and the Architect/Engineer of the project from any and all claims for infringement by reason of the use of such patent or copyright in connection with work agreed to be performed under this Contract, and shall indemnify the Owner and the Architect/Engineer for any cost, expense or damage which it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

8. SURVEYS, PERMITS AND REGULATIONS

- A. The Owner will furnish to the Contractor all site, topography and property surveys necessary for the execution of the work.
- B. The Contractor shall procure all permits, licenses and approval necessary for the execution of his Contract.
- C. The Contractor shall give all notices and comply with all state laws, codes, rules and regulations relating to the performance of the work, the protection of adjacent property, and the maintenance of passageways, guard fences or other protective facilities.
- D. The Contractor shall promptly notify the Architect/Engineer or the Owner of any variances of the Drawings or Specifications with that of any State law, code, rule or regulation. Upon such notification, the Owner will require correction of variance to comply with applicable law, code, rule or regulation at no additional cost to the Contractor.
- E. If charges for water, sewer and other utility connections made by municipalities are costs which the State is obligated to pay, the Contractor shall pay these charges where required by the Specifications.

9. SALES TAX

- A. The Contractor shall pay and include in his Bid all sales tax required by law on labor and purchased materials necessary for the execution of the Contract.

10. CONTRACTOR'S OBLIGATIONS AND SUPERINTENDENCE

- A. The Contractor shall provide and pay for all materials, labor, tools, equipment, transportation, and superintendence, necessary to execute, complete, and deliver the work within the specified time.
- B. Any work necessary to be performed after regular working hours, or on Saturdays, Sundays, or Legal Holidays, shall be performed without additional expense to the Owner.
- C. The Contractor shall furnish, erect, maintain, and remove such temporary facilities as may be required.
- D. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the Contract Documents, and shall complete the entire work to the extent of quality and workmanship implied by the Contract Documents and in a manner which will warrant acceptance by the Architect/Engineer and the Owner.
- E. At the site of the work the Contractor shall give his personal superintendence to the work or shall employ a construction superintendent or foreman, experienced in work of character covered by contract, who shall have full authority to act for the Contractor. It is understood that such representative shall be acceptable to the Owner and shall be one who can be continued in that capacity for the particular job involved unless he ceases to be on the Contractor's payroll. The superintendent or foreman shall coordinate and enforce requirements of the contract whether the particular item of work be under his direct supervision or under subcontract. He shall insure that work is executed by experienced mechanics.
- F. Contractors and Subcontractors employed upon work shall be required to conform to Labor and Employment Laws of the State of Kansas and various acts amendatory and supplementary thereto and to other laws, ordinances and legal requirements applicable thereto.
- G. The presence and observation of the work by the Architect/Engineer and the Construction Representative shall not relieve the Contractor of any of his obligation.
- H. The Contractor shall be responsible for the conduct of Contractor's employees and the employees of subcontractors and suppliers on the work site. The Contractor shall take immediate steps to remedy any activity which may be construed as discriminatory or which creates a hostile work environment. Activities covered by this provision include, but shall not be limited to, signs or language that are vulgar, profane or racially or sexually derogatory.

11. WEATHER CONDITIONS

- A. The Architect/Engineer or the Owner may temporarily suspend work of the Contractor when adverse weather or ground conditions exist or threaten which in their opinion could cause loss of structural integrity or other damage to the work in progress.

- B. In the event of temporary suspension of work, or during inclement weather, or whenever the Architect/Engineer or the Owner shall direct, the Contractor shall, and shall cause his Subcontractors to carefully protect his and their work and materials against damage or injury from the weather. If, in the opinion of the Architect/Engineer, or the Owner, any work or materials have been damaged or injured by reason of failure on the part of the Contractor or any of his Subcontractors so to protect his work, such materials shall be removed and replaced at the expense of the Contractor.

12. PROTECTION OF WORK AND PROPERTY--EMERGENCY

- A. The Contractor shall at all time safely guard the Owner's property from injury or loss in connection with his Contract. He shall at all times safely guard and protect his own work, and that of adjacent property, from damage. The Contractor shall replace or make good any such damage, loss or injury unless such be caused directly by errors contained in the Contract, or by the Owner, or his duly authorized representative.
- B. In case of an emergency which threatens loss or injury of property, or safety of life, the Contractor will be allowed to act, without previous instructions from the Architect/Engineer or the Owner, in a diligent manner. He shall notify the Architect/Engineer or the Owner promptly thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Architect/Engineer or the Owner for approval as provided for in Article 15, herein.

13. INSPECTION AND TESTING OF MATERIALS

- A. The authorized representatives and agents of State government shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records.
- B. They shall at all times have access to the work wherever it is in preparation or progress and the Contractor shall provide facilities for such access and for inspection.
- C. Should it be considered necessary or advisable at any time before final acceptance of the entire work to make an examination of work already completed, by removing or tearing out same, the Contractor shall, upon request of the Architect/Engineer or the Owner promptly furnish all necessary facilities, labor and materials. If such work is found to be defective in any aspect, due to fault of the Contractor or his Subcontractors, he shall assume all expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the Contractor will be reimbursed for such examination and replacement in accordance with Article 15 of these General Conditions.
- D. If the Contract Documents require any work to be specially tested or approved, the Contractor shall give the Architect/Engineer or Construction Representative timely notice of its readiness for testing or inspection. Such materials and equipment requiring testing shall be tested in accordance with accepted or specified standards, as applicable. The laboratory or inspection

agency shall be acceptable to the Architect/Engineer or the Owner and the Contractor will pay all costs incurred by the specified testing and laboratory procedures. Should retesting be required, due to failure of initial testing, the cost of such retesting shall be borne by the Contractor.

- E. The cost of any testing performed by manufacturers or Contractors for the purpose of substantiating acceptability of proposed substitution of materials and equipment, or the necessary conformance testing in conjunction with manufacturing processes or factory assemblage, shall be borne by the Contractor or manufacturer responsible.

14. REPORTS, RECORDS AND DATA

The Contractor shall submit to the Architect/Engineer or the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the Architect/Engineer or the Owner may request concerning work performed or to be performed under this Contract. See Article 24.

15. CHANGES IN THE WORK

- A. Except in cases of emergency, no changes in the work covered by the Contract Documents shall be made without having such change executed in writing by Contract Change Order and approved by the Architect/Engineer, Owner, and the Director of Accounts and Reports. Any change in the work performed by the Contractor without signed approval shall be done at the Contractor's expense.
- B. Changes in the work covered by Contract Change Order include, but are not limited to: extension or reduction in project completion time, change in request listing of subcontractors, charges or credits resulting from changes in construction. Charges or credits to the Contract sum for work covered by the approved Change Order shall be determined by one or more, or a combination of the following methods:
- 1) Unit or lump sum prices previously stipulated and approved in the Contractor's original bid proposal.
 - 2) An agreed to lump sum proposal with an itemized breakdown on major items of labor and materials including:
 - a) Material quantities and unit costs,
 - b) Labor breakdown by trade and unit costs,
 - c) Construction equipment,
 - d) Workmen's Compensation and liability insurance, and
 - e) Employment taxes under FICA and FUTA
 - 3) Cost-Plus work, with a not-to-exceed maximum dollar limit, based upon the actual cost of the work performed including those items in (2) a, b, c, d, and e above.

- C. The Contractor shall submit with his proposal his request for time extension or reduction (if any) and shall include sufficient information and dates to substantiate such claim.
- D. If the Contractor claims that by any instructions given him by the Architect/Engineer or the Owner, by drawings or otherwise, regarding the performance of the work or the furnishing of material under the Contract, involves extra cost, he shall give the Architect/Engineer or the Owner written notice thereof within two weeks after the receipt of such instructions and in any event before proceeding to execute the work, unless delay in executing the work would endanger life or property.

16. EXTRAS

Without invalidating the Contract, the Owner may order extra work or make changes by altering, adding to or deducting from the work, the Contract sum being adjusted in accordance with Article 15, herein.

17. TIME FOR COMPLETION

- A. It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the date of beginning and the time for completion as specified in the Contract of the work to be done hereunder are **ESSENTIAL CONDITIONS** of this Contract; and it is further mutually understood and agreed that the work embraced in this Contract shall be commenced on a date to be specified in the "Notice to Proceed". Unless otherwise provided in the Contract, the time for completion is measured by calendar days, not work days.
- B. The Contractor agrees that said work shall be prosecuted regularly and diligently at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the Completion of the work described in the Contract is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industry conditions prevailing in this locality, in accordance with 1983 local climatological data of Pittsburg, Kansas, produced by the National Weather Service, Department of Commerce. In agreeing to the time of completion, it will be assumed that the Contractor has obtained firm delivery dates on all materials and equipment. A delay in the delivery to the site of any materials or equipment will not be considered as a valid reason for a time extension to the Contract.
- C. It is further agreed that time is of the essence of each and every portion of this Contract and of the Specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this Contract. Provided, that the Architect/Engineer or the Owner determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the Owner. Provided further that the delay in completion of the work is due:

- 1) To unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather which may only be determined by comparing the total season in which such weather occurs with the average of previous five years; (rain, snow and cold weather are not causes for delay in completion of the work unless exceeding the five year average); and
- 2) To any delays of Subcontractors or suppliers occasioned by any of the causes specified in subsection 1) of this article.

- D. Provided, further, that the Contractor shall, within ten (10) days from the beginning of such delay, unless the Architect/Engineer or the Owner shall grant a further period of time prior to the date of final settlement of the Contract, notify the Owner, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of his decision in the matter.
- E. Permitting the work or any part of it to continue after the time fixed for its completion, or after the date to which the time for completion may have been extended, shall in no way operate as a waiver on the part of the Owner of any of his rights under the Contract.

18. CORRECTION OF WORK

- A. All work, all materials whether incorporated in the work or not, and all processes of manufacture and places of manufacture shall be at all times subject to the inspection of the Architect/Engineer or the Owner who shall be the final judge of the quality and suitability of the work, materials, and processes of manufacture for the purposes for which they are used. Should they fail to meet his approval they shall be forthwith reconstructed, made good, replaced or corrected, as the case may be, by the Contractor at his own expense. Rejected material shall be removed from the site as soon as replacement can be affected without substantial delay to the Project.
- B. If the Contractor defaults or neglects to carry out the work in accordance with the Contract Documents or fails to perform any provision of the Contract, the Owner may, after written notice to the Contractor and without prejudice to any other remedy he may have, make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including the cost of the Architect's/Engineer's additional services made necessary by such default, neglect or failure. Such Change Order **shall not** require the approval of the Contractor.

19. SUBSURFACE CONDITIONS FOUND DIFFERENT

Should the Contractor encounter subsurface or latent conditions at the site materially differing from those indicated in the Contract Documents, he shall immediately give notice

to the Architect/Engineer or the Owner of such conditions before they are disturbed. The Architect/Engineer or the Owner will thereupon promptly investigate the conditions, and if he finds that they materially differ from those indicated in the Contract Documents, he will at once make such changes as he may find necessary, any increase or decrease of cost resulting from such changes to be adjusted in the manner provided in Article 15 of the General Conditions.

20. RIGHT OF OWNER TO TERMINATE CONTRACT

- A. In the event that any of the provisions of this Contract are violated by the Contractor, or by any of his Subcontractors, the Secretary may serve written notice upon the Contractor and the Surety of his intention to terminate the Contract, such notice to contain the reasons for such intention, and unless within ten (10) days after the serving of such notice upon the Contractor, such violation or delay shall cease and satisfactory arrangement or correction be made the Contract shall upon expiration of said ten (10) days, cease and terminate.
- B. In the event of any such termination the Secretary shall immediately serve notice thereof upon the Surety and the Contractor, and the Surety shall have the right to take over and perform the Contract, provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the Owner may take over the work and prosecute the same to completion by Contract at the expense of the Contractor, and the Contractor and his Surety shall be liable to the Owner for any excess cost above the original Contract amount occasioned the Owner thereby. In such event, the Owner may take possession of and utilize in completing the work, such materials, appliances and plant as may be on the site of the work and necessary therefore.

21. SUBCONTRACTS

- A. The Contractor may utilize the services of specialty Subcontractors on those parts of the work, under normal contracting practices, as performed by such Subcontractors.
- B. Unless otherwise required by these Contract Documents or the Bidding Documents, the Contractor, as soon as practicable after the award of the Contract, shall furnish to the Architect/Engineer or the Owner in writing the names of the persons or entities proposed for each of the principal subcontracted portions of the work.

The Contractor shall not award any work to any Subcontractor found unqualified by the Architect/Engineer or the Owner.
- C. The Contractor shall be as fully responsible to the Owner for the acts and omissions of his Subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.
- D. Nothing contained in the Contract Documents shall create any contractual relation between any Subcontractor and the Owner.

- E. The Contractor, by written agreement, shall require each Subcontractor, to the extent of the work to be performed by the Subcontractor, to be bound to the Contractor by the Terms of these Contract Documents, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by these Documents, assumes toward the Owner and the Architect/Engineer. Said agreement shall preserve and protect the rights of the Owner under the Contract Documents. Where appropriate the Contractor shall require each Subcontractor to enter into similar agreements with his Sub-contractors.

22. MUTUAL RESPONSIBILITY OF CONTRACTS

If, through acts of neglect on the part of the Contractor, any other Contractor or any Subcontractor shall suffer loss or damage on the work, the Contractor agrees to promptly settle with such other contractor or Subcontractor by agreement or otherwise to resolve the dispute. If such other Contractor or Subcontractor shall assert any claim against the Owner or the Architect/Engineer on account of any damage alleged to have been sustained, the Owner shall notify the Contractor, who shall indemnify and hold harmless the Owner and the Architect/Engineer against any such claim.

23. CONSTRUCTION SCHEDULE AND REPORTS

- A. Immediately after execution and delivery of the Contract and before the first partial payment is made the Contractor (or designated prime contractor) shall meet with the other Contractors and/or Subcontractors and have each establish an estimated construction progress schedule. The Contractor shall then coordinate each Contractor's or Subcontractor's schedule and establish a mutually acceptable schedule for the entire progress of the work and shall deliver the schedule to the Architect/Engineer or the Owner in a form satisfactory to the Department.
- B. The construction progress schedule shall include as a minimum the following detail:
 - 1) Procurement and delivery dates for all equipment and material.
 - 3) Weekly definition of extent of work and activity for each trade under each Contract or Subcontract.
 - 4) Intended time for starting and completing each activity including indication of float time.
- C. The progress schedule shall be maintained current at all times by the Contractor. Revisions shall be made in the same detail as the original and shall be accompanied by written explanation of the reasons for the revision and shall be subject to the approval of the Architect/Engineer or the Owner.
- D. The Contractor shall submit monthly to the Architect/Engineer or the Owner progress reports showing actual percentage of each activity completed, estimated future progress and anticipated completion time of such activity.

24. PAYMENTS TO CONTRACTOR

- A. The Owner will make partial payments to the Contractor for the value, proportionate to the amount of the Contract, of all labor and material incorporated in the work during the preceding calendar month upon verification and approval of the Owner.
- B. The Contractor shall submit to the Owner a request for each payment, on the form provided by, and as directed in, the written notice to proceed or subsequent instructions. This request shall be submitted in the number of copies directed, and shall include the Contractor's detailed estimate of all items and activities of work completed, in the space provided on the form. If requested, the statement will be supported by such evidence as may be required, showing the Contractor's right to the payment claimed.
- C. Request for payment for preparatory work and materials delivered and suitably stored at the site to be incorporated into the work at some future period, will be given due consideration. The Owner may, under certain circumstances, approve payment up to 90% of the value of manufactured products delivered to a suitable warehouse at or near the locale of the Project. Stored products shall be insured to 100% of their value. A paid receipt, including an itemized inventory of all stored products, shall be obtained and provided the Owner.
- D. Payments by the Owner will be due within 30 days after verification of the request for payment from the Contractor.
- E. Ten percent (10%) of the certified amount of each payment will be retained until final completion and acceptance of all work covered by the Contract. However, if upon request of the Contractor, and anytime after 50 percent of the work has been physically completed, the remaining payment amounts may be made in full if the Owner finds that the progress of the work corresponds with the Contractor's construction progress schedule and the installed work is in conformance with the intent of the Contract Documents. The retained amount will remain at the constant level which was withheld at the time of 50% completion. The Owner reserves the right to reinstate the retainage on future payment requests if progress falls behind the construction progress schedule or work is not in conformance with the intent of the Contract Documents.
- F. All material and work covered by partial payments made shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of materials and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the right of the Owner to require the fulfillment of all of the terms of the Contract.
- G. Upon Substantial Completion of the Contract, retainage may be reduced to five percent (5%) of the Contract amount or to an amount deemed sufficient by the Owner to protect his rights and interest for any remaining work to be completed or unresolved issues or disputes.

Final payment will be made within thirty (30) days after final completion of the work, and will constitute acceptance thereof.

- H. On completion and acceptance of the work in the Contract, payment shall be made in full, including retained percentages thereon, less authorized deductions.
- I. Prior to final payment the Contractor shall submit a certification that all debts and claims against this Project have either been paid in full or otherwise satisfied, and give final evidence of release of all liens against the project and its Owner.

25. WITHHOLDING OF PAYMENTS

- A. The Owner may, after having served written notice on the Contractor, either pay directly any unpaid bills of which the Owner has written notice, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged. Whereupon payment to the contractor shall be resumed, in accordance with the terms of this Contract, but in no event, shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor or his Surety.
- B. In paying any unpaid bills of the Contractor, the Owner shall be deemed the agent of the Contractor, and any payment so made by the Owner, shall be considered as a payment made under the Contract by the Owner to the Contractor and the Owner shall not be liable to the Contractor for any such payment made in good faith.
- C. The Contractor agrees that he will indemnify and save the Owner harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, material suppliers, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this Contract.

26. ACCEPTANCE OF FINAL PAYMENT AS RELEASE

- A. The making of final payment shall constitute a waiver of all claims by the Owner except those arising from:
 - 1) unsettled liens
 - 2) faulty or defective work appearing after substantial completion
 - 3) failure of the work to comply with the requirements of the Contract Documents, or
 - 4) terms of any special guarantees required by the Contract Documents.
- B. The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and still unsettled.

27. PAYMENTS BY CONTRACTOR

The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of each Subcontractor's work, the

amount to which said Subcontractor is entitled, reflecting the percentage actually retained, if any, from payments to the Contractor on account of each Subcontractor's work. The Contractor shall, by an appropriate agreement with each Subcontractor, require each Subcontractor to make payments to his Subcontractors in similar manner.

28. BONDS

- A. A Performance Bond shall be furnished to the Owner by the Contractor in an amount equal to One Hundred Percent (100%) of the Contract price as security for the faithful performance of this Contract and as security for the payment of all persons performing labor and furnishing materials in connection with this Contract.
- B. A Public Works Bond as required by K.S.A. 60-1111 shall be furnished to the Owner by the Contractor in the amount of One Hundred Percent (100%) of the Contract price and shall be filed with the Clerk of the District Court in the county where the Project is being constructed. A Public Works Bond is **not** required for Projects with a Contract price below \$10,000.
- C. Bonds shall be issued by a Surety company licensed to do business in the State of Kansas.

29. SUBSTITUTE BONDS

- A. If at any time the Owner for justifiable cause, shall become dissatisfied with the Surety bound by the Performance and Public works Bond, the Contractor shall within five (5) days after notice from the Owner so to do, substitute an acceptable bond in such form and sum and signed by such other Surety as may be satisfactory to the Owner.
- B. No further payments shall be deemed due nor shall be made until the new Surety shall have furnished such an acceptable bond to the Owner.
- C. The credit due on premiums for unused portion of canceled bond shall be applied to premiums on the substitute bond and the difference for remaining premium cost will be paid by the Owner.

30. ARCHITECT/ENGINEER'S AUTHORITY

- A. The Architect/Engineer, when utilized, is retained by and is responsible to the Owner.
- B. The Architect/Engineer shall determine the amount, quality, acceptability and fitness of the several kinds of work and materials which are provided under this Contract and shall decide all questions which may arise in relation to said work and the construction thereof.
- C. The Architect/Engineer shall decide the meaning and intent of any portion of the Contract Documents where the same may be found obscure or be in dispute.
- D. He shall provide responsible observation of construction.
- E. He shall, within a reasonable time, act on submittals and make decisions on all matters relating to the progress of the work or the interpretation of the Contract Documents.

- F. The Architect/Engineer's decisions are subject to review by the Owner.

31. ASSIGNMENTS

- A. The Contractor shall not assign the whole or any part of this Contract or any moneys due or to become due hereunder without written consent of the Owner, Director of Purchases and the Director of Accounts and Reports. In case the Contractor assigns all or any part of any moneys due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to the Contractor shall be subject to prior claims of all persons, firms and corporations for services rendered or materials supplied for the performance of the work called for in this Contract.
- B. Such assignment shall not be made without the consent of the Surety unless the Surety has waived its right to notice of assignment.

32. QUANTITIES OF ESTIMATES

Wherever the estimated quantities of work to be done and materials to be furnished under this Contract are shown in any of the documents including the proposal, they are given for use in comparing bids and the right is especially reserved to increase or diminish them as they may be deemed reasonably necessary or desirable to complete the work contemplated by this Contract, and such increase or diminution shall in no way vitiate this Contract, nor shall any such increase or diminution give cause for claims or liability for damages.

33. LANDS AND RIGHTS-OF-WAY

Prior to the start of construction, the Owner shall furnish all land and rights-of-ways necessary for the carrying out and completion of the work to be performed under this Contract.

34. CONFLICTING CONDITIONS

- A. Any provision in any of the Contract Documents which may be in conflict or inconsistent with any of the Articles in these General Conditions or the Supplementary General Conditions shall be void to the extent of such conflict or inconsistency.
- B. In case of ambiguity or conflict between the Drawings and Specifications, the Specifications shall govern.
- C. Figured dimensions shall be followed in preference to measurements by scale. Large scale drawings take precedence over small scale drawings. Dimensions on drawings and details are subject to field measurements of adjacent work.

35. NOTICE AND SERVICE THEREOF

Any notice to any Contractor other than normal written directives or interpretations on behalf of the Owner relative to any part of this Contract shall be in writing and considered delivered and the service thereof completed, when said notice is posted, by certified or registered mail, to the said

Contractor at his last given address, or delivered in person to the said Contractor, or his authorized representative at the work.

36. REQUIRED PROVISIONS DEEMED INSERTED

Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the Contract shall forthwith be physically amended to make such insertion or correction.

37. SUSPENSION OF WORK

Should the Owner be prevented or enjoined from proceeding with the work either before or after the start of construction by reason of any litigation or other reason beyond the control of the Owner, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay; but time for completion of the work will be extended to such reasonable time as the Owner may determine will compensate for time lost by such delay; such determination to be set forth in writing.

38. SAFETY

A. Precaution shall be exercised at all times for the protection of persons (including employees) and property. The safety provisions of applicable laws and building and construction codes shall be observed. Machinery, equipment and hazards shall be guarded, and all hazards shall be guarded or eliminated in accordance with the safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America; Safety and Health Regulations for Construction, published by Bureau of Labor Standards, U.S. Department of Labor, and Occupational Safety and Health Administration, U.S. Department of Labor, and the Construction Safety Standards published by the U.S. Department of the Interior, Office of Surface Mining Reclamation and Enforcement.

B. It shall not be responsibility of the Owner or Architect/Engineer to enforce or direct safety rules or procedure.

39. INDEMNIFICATION

A. To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner and the Architect/Engineer and their agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense 1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom, and 2) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may

be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be constructed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

- B. In any and all claims against the Owner or the Architect/Engineer or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.
- C. The obligations of the Contractor shall not extend to the liability of the Architect/Engineer, his agents or employees, arising out of 1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications, or 2) the giving of or the failure to give directions or instructions by the Architect/Engineer, his agents or employees provided such giving or failure to give is the primary cause of the injury or damage.

40. KANSAS ACTS AGAINST DISCRIMINATION

The Contractor hereby agrees and covenants as a condition of the Contract that he will comply with the Kansas Acts Against Discrimination, Article 10, Chapter 44, Kansas Statutes Annotated and, in particular, K.S.A. 44-1030, 44-1031 and 44-1032, as amended, and that his failure to do so may be deemed to be a breach of contract and may subject the contract to be terminated.

41. LABOR AND WAGES

A. The Contractor hereby agrees and covenants as a condition of the Contract that he will comply with the provisions of Chapter 44, Kansas Statutes Annotated, Labor and Industries.

42. GENERAL GUARANTEE

- A. Neither the final payment nor any provision in the Contract Documents nor partial or entire occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any expressed warranties or responsibility for faulty materials or workmanship.
- B. The Contractor shall remedy and make good all defective workmanship and materials and pay for any damage to other work resulting therefrom, which appear within a period of one year from the date of final inspection and acceptance, providing such defects are not clearly due to abuse or misuse by the Owner. The Owner will give notice of observed defects with reasonable promptness.

- C. Guarantee on work executed after certified date of final inspection and acceptance will begin on the date when such work is inspected and approved by the Architect/Engineer or the Owner.
- D. Where guarantees or warranties are required in sections of specifications for periods in excess of one year, such longer terms shall apply.

43. ARBITRATION, DAMAGES AND WARRANTIES

Notwithstanding any language to the contrary, no interpretation of this Contract shall be allowed to find the state or any agency thereof has agreed to binding arbitration, the payment of damages or penalties upon the occurrence of a contingency, or to permit disclaimer of any or all warranties.

44. INSURANCE

- A. The Contractor shall not commence work under this Contract until he has obtained all the insurance required under this Article and such insurance has been approved by the Owner under the terms of this Agreement. The Contractor shall not allow any Subcontractor to commence work on his Subcontract until the insurance required of the Subcontractor have been so obtained and approved. All insurance except Workmen's Compensation shall name Owner and Architect/Engineer, if utilized, as additional insured's.
- B. The Contractor shall procure and maintain at his expense, from the date of the Contractor's receipt of a Purchase Order until acceptance of the entire work by the Owner, the following insurance:
 - 1) Workmen's Compensation Insurance for himself, his partners in business and all his employees to be engaged in work at the site of the Project. The Contractor shall require all Subcontractors to provide Workmen's Compensation for themselves, their partners in business and their employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor. Employees of the Contractor at the Project site and not protected under the Workmen's Compensation Statute shall be protected by adequate Employer's Liability Insurance provided by the Contractor or Subcontractor.
 - 2) Comprehensive General Liability Insurance, in an amount not less than Five Hundred Thousand Dollars (\$500,000) each occurrence and aggregate for bodily injury and property damage combined. Comprehensive General Liability shall include the following coverage: operations, broad form property damage; completed operations; independent contractor and contractual.
 - 3) Automobile Liability Insurance in an amount not less than Five Hundred Thousand Dollars (\$500,000) for bodily injury and for property damage combined. Said coverage shall cover all owned, non-owned or hired vehicles of the Contractor.

- C. Scope of insurance and special hazards: The Insurance provided under paragraph B above shall provide adequate protection for the Contractor and his Subcontractors against damage claims which may arise from operations under this Contract, whether such operations be by the insured or by anyone directly or indirectly employed by him, and also against any of the following special hazards which may be encountered in the performance of work under this Contract: loading and unloading; excavating, filling and drilling; blasting and explosions; demolition; underpinning; elevators and hoists.
- D. Subcontractors' Insurance: The Contractor shall either (1) require each of his Subcontractors to procure and maintain during the life of his Subcontract Subcontractor's General Liability Insurance, including property damage, and Automobile Liability Insurance of the type and in the same amount specified in the preceding paragraphs; or (2) insure the activities of his Subcontractors in his own policies.
- E. Proof of Insurance: The Contractor shall furnish the Owner with certificates showing the types, amounts, classes of operations covered, effective dates and dates of expiration of policies. Such certificates shall also contain substantially the following statement: "The Insurance covered by this certificate will not be cancelled or materially altered except after thirty (30) days written notice has been received by the Owner."

45. LIQUIDATED DAMAGES

- A. The Owner shall be entitled to liquidated damages to cover the costs of extra observation, the salaries of contingent forces and other expenses incurred by the Owner due to delays in completion of the work caused by the Contractor.

Liquidated damages shall be assessed in an amount per day as indicated below for each calendar day following the established Project completion date that the Project is not substantially completed. Such sum shall be deducted from the Contract by Contract Change Order prior to final payment.

- B. Liquidated damages are established at the rate of \$250.00 per calendar day.

46. ASSIGNMENT OF ANTITRUST CAUSES OF ACTION

- A. For good cause, and as consideration for executing this Contract, the Contractor, acting herein by and through its authorized agent, hereby conveys, sells, assigns and transfers to the State of Kansas all right, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of Kansas, relating to the particular product or service purchased or acquired by the State of Kansas pursuant to this Contract.

47. OPTIONAL PERFORMANCE AND PAYMENT GUARANTEE

- A. The Contractor may elect to use a Certificate of Deposit as a Performance and Payment Guarantee in lieu of providing a Performance Bond and Public Works Bond. The Certificate of Deposit shall have a value of not less than the amount of the Contract, and shall serve the purpose of the Performance and Public works Bonds as defined in Article 29 of the General Conditions of the Contract.

The Director of Purchases may accept a Certificate of Deposit payable to the State of Kansas, without condition, in lieu of any required surety bond from a Bidder or Contractor in the case of any Contract for construction, repairs or improvements under K.S.A. 75-3739, 75-3741 or 60-1111 and amendments thereto.

The Certificate of Deposit shall be subject to forfeiture to the State of Kansas and shall be a form and under such conditions, as may be applicable and prescribed by the Director, Division of Purchases, for surety bonds and in accordance with K.S.A. 60-1112.

Each such Certificate of Deposit shall be retained by the State for at least six (6) months after the final acceptance of the work for which the

Contract was entered into. At the end of such time period, the Certificate of Deposit may be endorsed back to the Contractor if there are no claims by the State under the Contract or by any person making a claim against the Certificate of Deposit.

All interest accruing under such Certificate of Deposit shall belong to the Contractor unless the Certificate of Deposit is forfeited to the State of Kansas.

48. SUBSTANTIAL COMPLETION

- A. When the Contractor considers the work ready for full utilization by the Owner, the Contractor shall declare in writing to the Owner that the work is substantially complete and request that the Owner issue a Notice of Substantial Completion therefore.

Within a reasonable time thereafter, the Owner and Contractor shall make an inspection of the work to determine the status of completion. If the Owner does not consider the work substantially complete, the Owner shall notify the Contractor in writing giving reasons therefor. If the Owner considers the work substantially complete, the Owner shall prepare and deliver to the Contractor a Tentative Notice of Substantial Completion which will fix the date of Substantial Completion and the release of any part of the retainage. The notice shall include a tentative list of items to be completed or corrected before final acceptance.

"Substantial Completion" means that all major items have been completed and that only minor items need to be completed.

49. FINAL INSPECTION AND ACCEPTANCE

- A. Upon written notice that the Contractor considers all work complete, the Owner shall make a final inspection with the Contractor and shall notify the Contractor in writing of incomplete or defective work revealed by the inspection.

After the Contractor has remedied all deficiencies to the satisfaction of the Owner and delivered all construction records, schedules, guarantees, Bonds, certificates of inspection, and other documents (all as required by the Contract Documents), the Contractor shall be promptly notified in writing by the Owner that the work is acceptable.

50. OVERTIME

- A. No work shall be done between 6:00 p.m. and 7:00 a.m., nor on Saturdays, Sundays, or legal holidays without permission of the Owner.

51. LEGAL ADDRESSES

- A. The business address of the Contractor given in the form of Bid is hereby designated as the place to which all notices, letters, and other communication to the Contractor will be mailed or delivered. The address of the Owner appearing hereinbefore is hereby designated as the place to which all notices, letters, and other communication to the Owner shall be mailed or delivered. Either party may change his address at any time by an instrument in writing delivered to the other party.

52. UNDERGROUND INSTALLATIONS

- A. Existing underground installations are indicated on the drawings only to the extent such information was made available to or discovered by the Architect/Engineer or the Owner in preparing the drawings. There is no guarantee as to the accuracy or completeness of such information, and all responsibility for the accuracy and completeness thereof is expressly disclaimed.

The Contractor shall be responsible for discovery of existing underground installations, in advance of excavating by contacting all local utilities and by prospecting.

53. INSPECTION OF CONSTRUCTION

- A. The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Owner. All work shall be conducted under the general direction of the Construction Representative and is subject to the Owner's inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the Contract.

- B. The Owner's inspections and tests are for the sole benefit of the Owner and do not -
 - 1) Relieve the Contractor of responsibility for providing quality control measures;
 - 2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;
 - 3) Constitute or imply acceptance; or
 - 4) Affect the continuing rights of the Owner after acceptance of the completed work under paragraph (G) below.
- C. The presence or absence of the Construction Representative does not relieve the Contractor from any contract requirement. Nor is the Construction Representative authorized to verbally change any term or condition of the specification. All changes in the work must be authorized in writing.
- D. The Contractor shall promptly furnish, without additional charge, all facilities, labor and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Owner. The Owner may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test or when prior rejection makes reinspection or retest necessary. The Owner shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the Contract.
- E. The Contractor shall, without charge, replace or correct work found by the Owner not to conform to Contract requirements, unless in the public interest the Owner consents to accept the work with an appropriate adjustment in Contract price. The Contractor shall promptly segregate and remove rejected material from the premises.
- F. If the Contractor does not promptly replace or correct rejected work, the Owner may (1) by Contract or otherwise, replace or correct the work and charge the cost to the Contractor or (2) terminate for default the Contractor's right to proceed.
- G. Unless otherwise specified in the Contract, the Owner shall accept, as promptly as practicable after completion and inspection, all work required by the Contract or that portion of the work the Owner determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Owner's rights under any warranty or guarantee.

54. SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

- A. The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has been investigated and satisfied itself as to the general and local conditions which can effect the work or its cost, including but not limited to (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the

availability of labor, water electric power, and roads; (3) uncertainties of weather, river stages, tides or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance.

The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Owner, as well as from the drawings and specifications made a part of this Contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Owner.

- B. The Owner assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Owner. Nor does the Owner assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its employees or agents before the execution of this Contract, unless that understanding or representation is expressly stated in this Contract.

END OF DOCUMENT

SAMPLE CONSTRUCTION CONTRACT

**THE STATE OF KANSAS
CONSTRUCTION CONTRACT**

(For use when a single contract is awarded for the project
as a whole, as authorized by K.S.A. 75-3741(b) as amended.)

1. This contract is made this _____ day of _____, 20____ by and between _____ representing the State of Kansas and hereinafter referred to as the first party, and _____ hereinafter referred to as the second party.
2. For and in consideration of the payments and agreements hereinafter mentioned, which are to be made and performed by the first party, the second party hereby agrees and contracts with the first party to commence and complete the construction described as follows:

a. Project No.: _____
b. Title/Description: _____
c. Location: _____

hereinafter called the Project, for the sum of _____ Dollars (\$_____) and all extra work in connection therewith, under the terms as stated in the Contract Document; and at the second party's own cost and expense to furnish all materials, supplies, machinery, equipment, tools, superintendence, labor, insurance and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Contract Documents, prepared by the project Engineer (hereinafter referred to as the Architect/Engineer) or any designee of the Secretary of Administration who is vested with the authority and responsibility of the Architect/Engineer for this project.

The second party agrees to meet the following completion date:

Substantial Completion: _____

Liquidated damages in the amount of \$_____ per day will be assessed if the project is not substantially complete on the above date.

3. For the purposes of this Contract, the term contract Documents shall include the following:
 - (a) Notice to Bidders
 - (b) Instructions to Bidders
 - (c) The Bid Form
 - (d) Contractor's Performance Bond
 - (e) Contractor's Public Works Bond to the State
 - (f) General Conditions of the Contract
 - (g) Supplemental General Conditions
 - (h) The Specifications
 - (i) Drawings, maps, plans, etc., prepared by Architect/Engineer or the designee of the Secretary of Administration
 - (j) All duly issued addenda
 - (k) All duly executed Contract Change Orders

SAMPLE CONSTRUCTION CONTRACT

It is hereby further agreed by the parties that the Contract Documents are intended to be complementary so that any work included in one portion of the Contract Documents which is not included in another portion should be executed by the second party as though the work was described in other portions.

4. The second party hereby agrees to use the services of the following subcontractors on this project:
 - a. Electrical subcontractor:
(Name) _____
(Address) _____
 - b. Mechanical subcontractor:
(Name) _____
(Address) _____
 - c. Additional subcontractors, if any, designated to perform any project alternates required by the Contract Documents which are listed in the Bid Proposal and which would change for (a) or (b) above:
(Name) _____
(Address) _____
(Name) _____
(Address) _____

The second party also agrees that no change or substitution may be made in the list of subcontractors without prior approval of the Secretary of Administration.

5. This contract shall be subject to, governed by, and construed according to the laws of the State of Kansas.
6. The second party agrees:
 - a. to comply with the Kansas Act Against Discrimination (K.S.A. 44-1001 et seq.) and the Kansas Age Discrimination in Employment Act (K.S.A. 44-1111 et seq.) and not to discriminate against any person who performs work hereunder, because of race, religion, color, sex, physical handicap unrelated to such person's ability to engage in this work, national origin or ancestry, or age;
 - b. to include in all solicitations or advertisements for employees, the phrase equal opportunity employer;
 - c. to comply with the reporting requirements set out in K.S.A. 44-1031 and K.S.A. 44-1116;
 - d. to include these provisions in every subcontract or purchase order so that they are binding upon such subcontractor or vendor;

- e. that a failure to comply with the reporting requirements of (c) above or if the contractor is found guilty of any violation or such acts by the Kansas Human Rights Commission it shall constitute a breach of the contract and the contract may be cancelled, terminated or suspended in whole or in part by the State of Kansas. Parties to this contract understand that subsections (b) through (e) of the paragraph are not applicable to a party who employs fewer than four employees or whose contract with this agency of the Kansas state government totals less than \$5,000 during the fiscal year.
7. Acceptance of Contract. This contract shall not be considered accepted, approved or otherwise effective until the statutorily required approvals and certifications have been rendered, and until funds for the contract have been encumbered with the Division of Accounts and Reports.
8. Arbitration, Damages, Warranties. Notwithstanding any language to the contrary, no interpretation of this contract shall be allowed to find the state of any agency thereof has agreed to binding arbitration, the payment of damages or penalties upon the contingency, or to permit disclaimer of any or all warranties. Further, the State of Kansas shall not agree to any attorney fees or late payment charges.
9. Termination Due to lack of Funding Appropriation. If appropriated funds are withdrawn from the project through legislative action and sufficient funds are not available to continue the function performed in this agreement or pay for the charges hereunder, the first party may terminate this agreement. The first party agrees to give written notice of termination to the second party at least 30 days in advance of termination. First party will pay to the second party all regular contractual payments due for work incurred prior to termination. The termination of the contract pursuant to this paragraph shall not cause any penalty to be charged to the first party.
10. Disclaimer of Liability. Neither the State of Kansas nor any agency thereof shall hold harmless or indemnify any contractor for any liability whatsoever.
11. Representative's Authority to Contract. By signing this document, the representative of the second party thereby represents that such person is duly authorized by the second party to execute this document on behalf of the second party and that the second party agrees to be bound by the provisions thereof.
12. Terms Herein Controlling Provisions. It is expressly agreed that the terms of each and every provision in this contract shall prevail and control over the terms of any other conflicting provision in any other document relating to this agreement.
13. The second party binds itself, its partners, heirs, executors, successors, assigns and legal representatives to all covenants of this agreement.
14. The second party shall not assign, sublet or transfer any interest in this agreement without the written consent of the Secretary of Administration.

SAMPLE CONSTRUCTION CONTRACT

In order to expedite the processing of this agreement, the parties mutually agree to the simultaneous execution of a copy of this document by all parties and persons mentioned below. After the execution of their copy of the agreement, the individuals shall submit them to the State of Kansas, Division of Purchases, for assembly and may make a copy for their files if they wish. Upon receipt of all executed copies, and the submittal of the required bonds and insurance certificates, the Division of Purchases shall date and assemble the copies and it shall constitute a binding agreement as of the date of assembly. The assembled copies shall be retained in the Division of Purchases, and fully-executed set of contracts shall be delivered to the contractor and state agency. It is further agreed that if any individual wishes to change any part of the agreement, they shall notify the Division of Purchases, who shall prepare a new agreement and resubmit it to all parties and persons mentioned below for their signatures and processing as mentioned above.

Signed by the respective parties as follows:

STATE OF KANSAS, FIRST PARTY

SECOND PARTY

BY: _____
State Agency

BY: _____
Company Name

Head of State Agency

Authorized Signature

Director of Purchases

FEIN

APPROVED:

BY: _____
Director of Architectural Services

BY: _____
Director of Accounts and Reports

DA Form 141a
[[(Rev. 8/91)
SMS 9/97

END OF SAMPLE CONSTRUCTION CONTRACT

**U.S. DEPARTMENT OF THE INTERIOR
Office of Surface Mining Reclamation and Enforcement**

**Certifications Regarding Debarment, Suspension and
Other Responsibility Matters, Drug-Free Workplace
Requirements and Lobbying**

Persons signing this form should refer to the regulations referenced below for complete instructions.

Certification Regarding Drug-Free Workplace Requirements (Grantees Other Than Individuals) (See Appendix C of Subpart D of 43 CFR 12).

Certification Regarding Debarment, Suspension and Other Responsibility Matters - Primary Covered Transactions. (See Appendix A of Subpart D of 43 CFR 12).

Certification Regarding Lobbying (See 43 CFR 18).

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions (See Appendix B of Subpart D of 43 CFR 12).

Signature on this form provides for compliance with certification requirements under 43 CFR Parts 12 and 18. The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Office of Surface Mining determines to award the covered transaction, grant or cooperative agreement.

PART A: Certification Regarding Debarment, Suspension and Other Responsibility Matters - Primary Covered Transactions

_____ *CHECK IF THIS CERTIFICATION IS FOR A PRIMARY COVERED TRANSACTION AND IS APPLICABLE*

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principles:
 - (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.
 - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification of destruction of records, making false statements, or receiving stolen property.
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local)
2. The prospective primary participant agrees by submitting this proposal that it will include the clauses under Part B: Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

3. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

PART B: Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions

___ *CHECK IF THIS CERTIFICATION IS FOR A LOWER TIER COVERED TRANSACTION AND IS APPLICABLE.*

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any Federal department or agency.
2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

PART C: Certification Regarding Drug Free Workplace Requirements

___ *CHECK IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS NOT AN INDIVIDUAL.*

1. The grantee certifies that it will or continue to provide a drug-free workplace by:
 - (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
 - (b) Establishing an ongoing drug-free awareness program to inform employees about --
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's policy of maintaining a drug-free workplace;
 - (3) Any available drug counseling, rehabilitation and employee assistance programs; and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
 - (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
 - (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will --
 - (1) Abide by the terms of the statement and
 - (2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;

- (e) Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification numbers(s) of each affected grant;
 - (f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted –
 - (1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or
 - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State or local health, law enforcement, or other appropriate agency;
 - (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e) and (f).
2. The grantee shall provide below the site(s) of the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code)

☐ Check if there are workplaces on file that are not identified here.

PART D: Certification Regarding Lobbying

☐ *CHECK IF CERTIFICATION IS FOR THE AWARD OF ANY OF THE FOLLOWING AND THE AMOUNT EXCEEDS \$100,000: A FEDERAL GRANT OR COOPERATIVE AGREEMENT; SUBCONTRACT, OR SUBGRANT UNDER THE GRANT OR COOPERATIVE AGREEMENT.*

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

DI-2010 CERTIFICATION

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants and contracts under grants, loans and cooperative agreements) and that all subrecipients shall certify accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

As the authorized certifying official, I hereby certify that the above specified certifications are true.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

TYPED NAME AND TITLE

DATE

This form consolidates DI-1953, DI-1954, DI-1955, DI-1956 and DI-1963.

DI-2010 (March 1995)
Modified for OSM Use

AVS AML CONTRACTOR INFORMATION FORM

You must complete this form for your AML contracting officer to request an eligibility evaluation from the Office of Surface Mining to determine if you are eligible to receive an AML contract. This requirement applies to contractors and their sub-contractors and is found under OSM's regulations at 30 CFR 874.16.

Part A: General Information

Business Name: _____ Tax Payer ID No.: _____

Address: _____

City: _____ State: _____ Zip Code: _____ Phone: _____

Fax No.: _____ E-mail address: _____

Part B: Legal Structure

☐ Corporation ☐ Sole Proprietorship ☐ Partnership ☐ LLC
☐ Other (please specify) _____

Part C: Certifying and updating information in the Applicant/Violator System (AVS).

Select only one of the following options, follow the instructions for that option, and sign below.

I, _____, have the express authority to certify that:
(print name)

1. _____ Information on the **attached** Entity Organizational Family Tree (OFT) from AVS is accurate, Complete, and up-to-date. If you select this option, you **must** attach an Entity OFT from AVS to this form. Sign and date below and do not complete Part D.
2. _____ Part of the information on the **attached** Entity OFT from AVS is missing or incorrect and must be updated. If you select this option, you **must** attach an Entity OFT from AVS to this form. Use Part D to provide the missing or corrected information. Sign and date below and complete Part D.
3. _____ Our business currently has no information AVS. If you select this option, you must provide all information required in Part D. Sign and date below and complete Part D.

Date	Signature	Title
------	-----------	-------

IMPORTANT! In order to certify in Part C to the accuracy of existing information in AVS, you must obtain a copy of your business' Entity OFT. To obtain an Entity OFT, contact the AVS Office, toll-free, at 800-643-9748

AVS AML CONTRACTOR INFORMATION FORM

Part D:

Contractor's Business Name: _____

If the current Entity OFT information for your business is incomplete or incorrect in AVS, or if there is no information in AVS for your business, you must provide all of the following information as it applies to your business. Please make as many copies of this page as you require.

Name	_____	Position/Title	_____
Address	_____	Telephone #	_____
	_____	% of Ownership	_____
Begin Date:	_____	Ending Date:	_____

Name	_____	Position/Title	_____
Address	_____	Telephone #	_____
	_____	% of Ownership	_____
Begin Date:	_____	Ending Date:	_____

Name	_____	Position/Title	_____
Address	_____	Telephone #	_____
	_____	% of Ownership	_____
Begin Date:	_____	Ending Date:	_____

Name	_____	Position/Title	_____
Address	_____	Telephone #	_____
	_____	% of Ownership	_____
Begin Date:	_____	Ending Date:	_____

Name	_____	Position/Title	_____
Address	_____	Telephone #	_____
	_____	% of Ownership	_____
Begin Date:	_____	Ending Date:	_____

PAPERWORK REDUCTION STATEMENT

The Paperwork Reduction Act of 1995 (44 U.S.C. 3501) requires us to inform you that: Federal Agencies may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. This information is necessary for all successful bidders prior to the distribution of AML funds, and is required to obtain a benefit.

Public reporting burden for this form is estimated to range from 15 minutes to 1 hour, with an average of 22 minutes per response, including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. You may direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Office of Surface Mining Reclamation and Enforcement, Room 202 SIB, 1951 Constitution Ave., NW, Washington D.C. 20240.

DIVISON 1 – GENERAL REQUIREMENTS

INDEX

SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

- 1.1 Description
- 1.2 Technical Contract Specifications
- 1.3 Contract Drawings

PART 1 - GENERAL

1.1 Description

A. General

The work to be performed under these Contract Documents comprises the Hwy 400 Dam Stabilization Project for the Kansas Department of Health and Environment, Surface Mining Section, Abandoned Mine Land Program. Construction work included in the project consists of the following general classifications of work:

- | | |
|--------------------------------|-------------------------------------|
| 1. Mobilization/Demobilization | 5. Erosion Control Mat Installation |
| 2. Clear and Grub | 6. Revegetation |
| 3. Earthwork Operations | 7. General Construction |
| 4. Rock Embankment | 8. Drainage Structure |

B. Special Requirements

Contractor shall have Work of the Project ready for final inspection by the SMS on or before 365 days, following the written Notice to Proceed. Failure to meet this deadline may result in liquidated damage penalties being assessed.

1.2 Technical Contract Specifications

The Technical Contract Specifications, which follow and which shall govern the materials furnished and work performed in the construction of the Work covered by this Contract, are divided, classified, designated, and arranged as follows:

DIVISION 1 - GENERAL REQUIREMENTS

DIVISION 2 - SITE WORK

Part 2 of this section contains detailed descriptions of the planned work at KS-0552 and references the applicable specifications.

1.3 Contract Drawings

The Contract Drawings upon which the bids and the Contract are based are listed for information and reference as follows:

Sheet Title	Sheet No.
Title Sheet	1 of 7
Project Map	2 of 7
Grading Plan	3 of 7
Profile &Details	4 of 7
Erosion Control Details	5, 6 of 7
Plan View & Photos of Dam	7 of 7

END OF SECTION 01010

INDEX

SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

- 1.1 Description
- 1.2 Change Orders
- 1.3 Pay Items

PART 1 - GENERAL

1.1 Description

- A. This Section covers methods of measurement and payment for items of work under this Contract. The Contractor may request payments no more frequently than monthly as described in Item 24 of Document D. Partial payments on lump sum items shall be based on the percentage complete at the time of payment request. Payment on unit price items shall be based on the number of units installed at the time of the payment request. Partial payment for materials in advance of installation shall be made upon approval of required submittals and submission of manufacturer's invoice.
- B. The total Bid Price shall cover all Work required by the Contract Documents. All costs in connection with the proper and successful completion of the Work, including furnishing all materials; providing all construction equipment and tools; and performing all necessary labor and supervision to fully complete the Work, shall be included in the bid prices. All work not specifically set forth as a pay item in the Bid Form shall be considered a subsidiary obligation of the Contractor and all costs in connection therewith shall be included in the bid prices.

1.2 Change Orders

Any Change Orders shall be initiated by the Consultant with the approval of the SMS, or by the SMS. Change Orders shall not constitute a change in the scope of this Contract.

1.3 Pay Items

The Measurement and Payment for individual work items are described in the Division 2 Specifications. Payment for additional items authorized by change orders shall be based on the unit prices indicated in each change order.

END OF SECTION 01025

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SECTION 01041 - PROJECT COORDINATION

PART 1 - GENERAL

- 1.1 Definitions
- 1.2 Notice to Landowners and Authorities
- 1.3 Site Administration
- 1.4 Construction Limits
- 1.5 Equipment Storage
- 1.6 Laws and Regulations
- 1.7 National Pollutant Discharge Elimination System Permit
- 1.8 Threatened and Endangered Species Action Permit
- 1.9 Dewatering Permit
- 1.10 Clean Water Act Compliance
- 1.11 Migratory Bird Treaty Act Compliance
- 1.12 Protection Against Invasive Species Introduction and/or Spread

PART 1 - GENERAL

1.1 Definitions

A. Department

Kansas Department of Health and Environment (KDHE)
Surface Mining Section (SMS)
Abandoned Mine Land Program (AML)

B. SMS

The Surface Mining Section (SMS) in these Specifications refers to the SMS Staff which is acting on behalf of KDHE to insure work is done in accordance with the Drawings and Specifications.

C. Engineer

The SMS or designee which is acting on behalf of the SMS to ensure work is done in accordance with the Drawings and Specifications.

1.2 Notice to Landowners and Authorities

- A. Contractor shall notify owners of adjacent property and utilities when prosecution of the work may affect them. When it is necessary to temporarily deny access to owners or tenants to their property, or when any utility service connection must be interrupted, Contractor shall give notices sufficiently in advance to enable the affected persons to provide for their needs. Notices will conform to any applicable local ordinance and, whether delivered orally or in writing, will include appropriate information concerning the interruption and instructions on how to limit their inconvenience.
- B. Utilities and other concerned agencies shall be contacted at least 48 hours prior to excavating near underground utilities or pole lines. Existing utilities at the construction site may include, but not be limited to, storm sewer, sanitary sewer, water, electric, telephone, gas, pipelines, cables, and tile lines.
- C. The Contractor shall make all necessary arrangements with utility companies for the preservation of all utility lines and shall replace and/or relocate utility lines as required for construction at his own expense.
- D. Underground utilities thought to exist in the area of the Work are Craw-Kan telephone. All utilities may not be shown on the Drawings, or if shown, may not be precisely located. The Contractor shall notify 1-800-Dig-Safe to schedule utility locations when needed. A minimum 48-hour notice to utility companies before any excavation or disturbance to the ground is required.

F. The telephone companies that own facilities in the area are:

Craw-Kan Telephone Coop.
Girard, Kansas
(620) 724-8235

G. The KDOT, Area Supervisor, Mr. Joe Engle (620) 762-231-7560, shall be notified one week in advance of any construction within their right-of-way.

1.3 Site Administration

Contractor shall be responsible for all areas of the site used by Contractor and all Subcontractors in the performance of work. Contractor shall exert full control over the actions of all employees and other persons with respect to the use and preservation of property and existing facilities.

1.4 Construction Limits

- A. The Contractor shall confine his construction operations within the site boundary limits indicated on the Drawings or, where not indicated, within the immediate area required to perform the work.
- B. Use care in placing construction tools, equipment, excavated materials, and construction materials and supplies so as to cause the least possible damage to and interference with property surrounding the site.

1.5 Equipment Storage

Materials and equipment may be stored inside the construction limits in locations approved by the SMS. Construction materials shall be stored in accordance with manufacturer's instructions.

1.6 Laws and Regulations

The Contractor is required to comply with all federal, state, county and local laws, regulations, and ordinances in the performance of the work described by these Contract Documents.

1.7 National Pollutant Discharge Elimination System Permit

A NPDES permit may be required for this project. The SMS shall obtain the permit if required. The Contractor is responsible for compliance with all terms, fees, conditions, and monitoring which may be required. Contractor covenants, warrants and agrees that it shall comply with all requirements of the Kansas Department of Health and Environment, Surface Mining Section, and the NPDES Permit in regard to the reclamation of the property. Contractor further agrees to hold harmless, defend and indemnify the KDHE Surface Mining Section against any claim, expense, loss or liability as a result of Contractor's failure to comply with the NPDES Permit requirements, whether the same are the result of the acts or omissions of the Contractor's agents, servants or employees.

1.8 Threatened and Endangered (T&E) Species Action Permit

If a KDWP T&E action permit to conduct work within the habitat of state and federally listed threatened and endangered species is required for this project, a copy of the permit will be provided by the SMS.

1.9 Dewatering Permit

The Contractor may be required to obtain a temporary water appropriations permit from the KDA, Division of Water Resources for dewatering pit(s) during reclamation. This is because dewatering operations can constitute a beneficial use of water in accordance with state regulations. Information about dewatering permitting regulations, along with forms and instructions for obtaining the dewatering permit, may be obtained by contacting:

Ms. Joan Peterson
Water Right Section - New Applications
Division of Water Resources
Kansas Department of Agriculture
109 SW 9th Street, 2nd Floor
Topeka, KS 66612-1283
(785) 296-2709

Or,

Katherine A. Tietsort
Water Commissioner
Topeka Field Office
Kansas Department of Agriculture
Division of Water Resources
109 S.W. 9th Street, 1st Floor
Topeka, KS 66612-2216
(785) 368-8251
Fax: 785-296-4619
KatieT@kda.state.ks.us

1.10 Clean Water Act Compliance

A U.S. Army Corps of Engineers 404 permit may be required for this project. The Contractor is responsible for compliance with any terms, conditions, and monitoring which may be required. SMS shall obtain the permit if required and shall provide a copy to the Contractor, which must be kept at the project site. The Contractor covenants, warrants and agrees that it shall comply with all requirements of the Kansas Department of Health and Environment, Surface Mining Section, and the 404 Permit in regard to the reclamation of the property. The Contractor further agrees to hold harmless, defend and indemnify the KDHE Surface Mining Section against any claim, expense, loss or liability as a result of The Contractor's failure to comply with the 404 Permit requirements, whether the same are the result of the acts or omissions of the Contractor's agents, servants or employees.

1.11 Migratory Bird Treaty Act Compliance

The Migratory Bird Treaty Act (MTBA) prohibits the taking, killing possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the U.S. Department of the Interior. While the provisions of the MBTA are applicable year-round, most migratory bird nesting activity in Kansas occurs during the period of April 1 to July 15. Therefore, to avoid taking of migratory birds by destruction of nests during clearing of trees and brush, the U.S. Fish and Wildlife Service (USFWS) mandates that no clearing activities shall take place between April 1 and July 15.

1.12 Protection against Invasive Species Introduction and/or Spread

Invasive species have been indentified as a major factor in the decline of native flora and fauna and impact aquatic resources. Executive Order 13112 Section 2 (3) directs Federal agencies to not authorize, fund, or carry out action s that it believes are likely to cause or promote the introduction or spread of invasive species in the U.S. or elsewhere, and to insure threat all feasible and prudent measures to minimize risk of harm will be taken in conjunction with other actions. Therefore the U.S. Fish and Wildlife Service (USFWS) recommends the implementation of the following best management practice as the proactive measures to satisfy the directive to prevent the inadvertent spread of exotic and invasive species:

All equipment brought on-site will be thoroughly washed to remove dirt, seeds, and plant parts. Any equipment that has been in a body of water within the past 30 days will be thoroughly cleaned wit hot water greater than 140 degrees Fahrenheit (typically the temperature found in commercial car washes) and dried for a minimum of five (5) days before being used at this project site. In addition, before transporting equipment from this project site, all visible mud, fish and animal parts, and plants will be removed, all water will be eliminated, and the equipment will be thoroughly cleaned. Anything that came in contact with water will be cleaned and dried following this procedure.

END OF SECTION 01041

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SECTION 01050 - FIELD ENGINEERING

PART 1 - GENERAL

- 1.1 Dimensions and Elevations
- 1.2 Position, Gradient and Alignment
- 1.3 Contour Data

PART 1 - GENERAL

1.1 Dimensions and Elevations

Verify in the field all dimensions and elevations that are required. Elevations indicated and referred to in the Specifications and on the Drawings are based on the control points shown on the Drawings. These points shall be used as datum for work.

1.2 Position, Gradient and Alignment

- A. Competent survey personnel employed and paid by the Contractor shall lay out and stake out all control points and reference stakes required for construction of the project. The Contractor shall carefully preserve all monuments, bench marks, and reference points shown on the Drawings and in case of destruction, Contractor shall be charged with replacement.
- B. All work performed under this Contract shall conform with the lines, grades and elevations shown on the Drawings and within any tolerances which may be set forth in the Specifications. Any work not conforming to the lines, grades, or elevations indicated on the Drawings may be ordered removed and replaced at the Contractor's expense.
- C. Contractor shall make available to the SMS all survey data which pertains to the layout and construction of the project. Surveys performed for quantity estimates shall also be available to the SMS.

1.3 Contour Data

Cross sections shown on the Drawings, as well as earthwork volumes calculated on 5-foot stations, were computer generated from contours shown on the plan views. The digital contour data is available to the Contractor and shall be provided by the SMS upon the Contractor's request to the SMS. Data for both existing ground and proposed finished grades are available in electronic form.

END OF SECTION 01050

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SECTION 01090 - REFERENCE STANDARDS

PART 1 - GENERAL

- 1.1 General References
- 1.2 KDOT Standard Specifications
- 1.3 Abbreviations
- 1.4 Order of Precedence for Contract Documents

PART 1 - GENERAL

1.1 General References

- A. Reference to standard specifications of any technical society, organization, or association or to codes of local or state authorities shall mean the latest standard, code, specification or tentative specification adopted and published at the date of taking bids, unless specifically stated otherwise.
- B. Applicable codes and standards referred to in these Specifications shall establish minimum requirements for equipment, materials, and construction, and shall be superseded by more stringent requirements of Drawings and Specifications when and where they occur.
- C. Any conflicts between Drawings and Specifications and applicable codes and standards shall be referred to the Engineer for a decision thereon.

1.2 KDOT Standard Specifications

- A. Where reference is made in the Specifications to "KDOT Standard Specification" or "KDOT Standard Number", such reference shall mean the latest edition and revisions of the Kansas Department of Transportation's "STANDARD SPECIFICATIONS for State Road and Bridge Construction", and the standard drawings issued by KDOT.
- B. When these references are made, the referenced section, paragraph, sub-paragraph, drawing, etc. will govern as though it were repeated verbatim herein. However, the reference herein to a specific KDOT Standard Drawing Number, Specification Section, paragraph, sub-paragraph or material specification shall not imply or infer that any other requirements of the KDOT Standard Specifications or Drawings will apply to this Project.

1.3 Abbreviations

The following abbreviations as used in the Contract Documents are defined to mean the following:

AASHTO	American Association of State Highway & Transportation Officials
ACI	American Concrete Institute
AML	Abandoned Mine Land Program of the SMS
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers' Association
AWWA	American Water Works Association
DWR	KDA-Division of Water Resources
KDA	Kansas Department of Agriculture
KDHE	Kansas Department of Health and Environment
KDOT	Kansas Department of Transportation
KDWP	Kansas Department of Wildlife and Parks
NPDES	National Pollutant Discharge Elimination System
OSM	Office of Surface Mining

OSHA	U.S. Department of Labor - Occupational Safety and Health Admin.
SMS	Surface Mining Section of KDHE
SWPPP	Storm Water Pollution Prevention Plan

1.4 Order of Precedence for Contract Documents

- A. Where more than one set of requirements are shown on different Drawings or are in conflict with the Specifications, the most stringent requirements are intended and will be enforced.
- B. Level of Precedence:
 - 1. Addenda supersede over all levels.
 - 2. Technical Contract Specifications supersede Drawings.
 - 3. Large scale details supersede small scale details, plans and elevations.
 - 4. Indicated dimensions supersede scaled dimensions.

END OF SECTION 01090

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SECTION 01200 - PROJECT MEETINGS

PART 1 - GENERAL

- 1.1 Purpose
- 1.2 Quality Assurance
- 1.3 Meeting Schedule and Minutes
- 1.4 Preconstruction Conference
- 1.5 Project Meetings

PART 1 - GENERAL

1.1 Purpose

To enable orderly review during progress of the Work, and to provide for systematic discussions of problems, the SMS shall conduct project meetings throughout the construction period.

1.2 Quality Assurance

For those persons designated by the Contractor to attend and participate in project meetings, the Contractor shall provide written required authority to commit the Contractor to solutions agreed upon in the project meetings.

1.3 Meeting Schedule and Minutes

Regular progress meetings will be held, in conjunction with pay estimates, once every month at the SMS office. Additional special project meetings will be held as necessary to address specific problems, issues or questions which cannot be postponed until the regular monthly project meeting. The SMS shall prepare and distribute the minutes from the meetings.

1.4 Preconstruction Conference

Prior to the commencement of work at the site, a Preconstruction Conference shall be held at a mutually agreed time and place. The Conference shall be attended by the SMS, the Contractor and Contractor's Superintendent, Principal Subcontractors, Governmental representatives as appropriate, and any others as requested by the Contractor or the SMS. The agenda shall include the following:

1. Project Coordination
 - a. Designation of Responsible Personnel
 - b. List of Subcontractors and Suppliers
 - c. Utility locations
2. Distribution of Contract Documents and discussion of submittals:
 - a. Construction Schedule and Work Sequence
 - b. Proposed site access points and facility locations
 - c. Proposed water control plan & approval of SWPPP
 - d. Obtain required signatures on Document E - Lobbying and Disbarment
 - e. Distribution and discussion of NEPA permit documents.
3. Procedures for:
 - a. Field Decisions
 - b. Change Orders
 - c. Applications for Payment
 - d. Creation and Maintenance of Project Records

4. Use of Project Site Premises
 - a. Traffic Control
 - b. Storage Areas
 - c. Security Procedures
 - d. Temporary Utilities
 - e. Temporary Fences

1.5 Project Meetings

A. Attendance

To the maximum extent practicable, assign the same person or persons to represent the Contractor at the project meetings throughout progress of the Work. The Contractor's Superintendent must be present at the meeting. Subcontractors, materials suppliers, and others may be invited to attend those project meetings in which their aspect of the Work is involved.

B. Minimum Agenda

1. Review, revise as necessary, and approve minutes of previous meetings
2. Review progress of the Work since last meeting, including status of submittals for approval
3. Identify problems which impede planned progress
4. Develop corrective measures and procedures to regain planned schedule
5. Review monthly pay estimate
6. Complete other current business

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SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

- 1.1 Construction Schedules and Work Sequence
- 1.2 Shop Drawings and Engineering Data
- 1.3 Water Control
- 1.4 Site Access Points and Facilities
- 1.5 Required Submittals

PART 1 - GENERAL

1.1 Construction Schedule and Work Sequence

- A. At the Pre-Construction meeting the Contractor shall submit to the SMS for review a schedule of the proposed construction operations. Schedule shall show a complete sequence of construction by major activity and a time schedule for completion. At a minimum, the schedule shall identify work of separate stages including temporary erosion control measures, utility location, and notification of authorities, clearing, draining impoundments, earthwork, demolition, drainage structures, fencing, final grading, revegetation and other logically grouped activities. Show projected percentage and completion for each item of work as of time of each Application for Progress Payment. Contractor shall submit updated construction schedule with each application for payment.
- B. If work falls behind schedule, Contractor shall submit additional progress reports at such intervals as the SMS may request.

1.2 Shop Drawings and Engineering Data

- A. Shop Drawings and Engineering data covering all materials which will become a permanent part of the Work under this Contract shall be submitted to the SMS for review. These data shall include drawings, descriptive information, and manufacturers' product data.
- B. All submittals shall be identified with the name and number of this Contract, Contractor's name, and references to applicable specification paragraphs and Contract Drawings.
- C. Submittals which are not acceptable shall be returned to the Contractor within 10 days by the SMS. Returned submittals shall be marked **RETURNED FOR CORRECTION**. The Contractor shall resubmit returned submittals with correction within 10 days. Delays for submittals shall not constitute an extension of Contract Time.

1.3 Water Control

If requested by the SMS, the Contractor shall submit a water control plan for the removal of any water from the site. Water shall be removed in accordance with any NPDES requirements and in such a manner as to cause minimum impacts downstream.

1.4 Site Access Points and Facilities

Contractor shall identify locations for site access, roads, equipment and material storage, equipment maintenance areas, parking, fuel tank, and any other on site facilities.

1.5 Required Submittals

- A. Submittals shall be made for the following items:
 - 1. Construction Schedule and Work Sequence
 - 2. Proposed site access points and facilities
 - 3. Proposed Water Control Plan
 - 4. Other submittals required by Division 2 Specifications
- B. The Construction Schedule, site access points, and facility locations must be approved by the SMS prior to work commencing at the site.

END OF SECTION 01300

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SECTION 01400 - QUALITY CONTROL

PART 1 - GENERAL

- 1.1 Quality Control, General
- 1.2 Unfavorable Weather Conditions
- 1.3 Manufacturer's Instructions
- 1.4 Testing Laboratory Services
- 1.5 Contractor's Responsibility
- 1.6 Test Results

PART 1 - GENERAL

1.1 Quality Control, General

The Contractor shall maintain quality control over subcontractors, suppliers, manufacturers, products, services, site conditions, and workmanship to produce first class work.

1.2 Unfavorable Weather Conditions

During unfavorable weather, wet or frozen ground, or other unsuitable construction conditions, the Contractor shall confine their operations to work which will not be adversely affected by such conditions, unless special means or precautions are taken by Contractor to perform the work in a proper and satisfactory manner.

1.3 Manufacturer's Instructions

- A. When required by individual Specification Sections, provide at job site manufacturers printed instructions with one copy for inclusion in project record documents file for delivery, storage, assembly, installation, start up, adjusting, and finishing, as appropriate.
- B. Contractor must comply with instructions in full detail, include each step in sequence. Should instructions conflict with Contract Documents, request clarification from SMS before proceeding.

1.4 Testing Laboratory Services

The Contractor shall retain and pay for the services of a state certified testing agency or laboratory to conduct materials and construction compliance tests as required by the Specifications. The testing agency or laboratory shall specialize in the required services. The type, number and extent of the materials testing program is described in each respective Section of the Technical Specifications.

1.5 Contractor's Responsibility

- A. The requirements for specified inspections and tests are not intended to limit the Contractor's responsibility for completion of all work in accordance with requirements of the Contract Documents. Said tests and inspections are intended to establish a minimum testing level which is considered necessary to adequately monitor compliance of construction materials and methods with Contract requirements.
- B. Contractor shall cooperate with laboratory personnel; provide access to work; notify laboratory sufficiently in advance of operations to allow for assignment of personnel and scheduling of tests; furnish labor and facilities to provide access to work to be tested; and obtain and handle samples at the site.

1.6 Test Results

- A. Results of inspections or tests shall be submitted to the SMS. The SMS reserves the option to conduct independent tests to validate or amplify Contractor tests. The SMS shall pay for all costs for any testing which is conducted to verify Contractor's tests.
- B. Any work found to be in non-compliance with requirements of the Contract Documents shall be corrected by the Contractor and retested. The costs of retesting shall be paid by the Contractor.

END OF SECTION 01400

SECTION 01500
CONSTRUCTION FACILITIES &
TEMPORARY CONTROLS

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SECTION 01500
CONSTRUCTION FACILITIES & TEMPORARY CONTROLS

PART 1 – GENERAL

- 1.1 General
- 1.2 Utilities
- 1.3 Maintenance of Traffic
- 1.4 Barricades
- 1.5 Fences
- 1.6 Protection of Public & Private Property
- 1.7 Security
- 1.8 Roads
- 1.9 Equipment & Materials Storage & Parking
- 1.10 Dust Control
- 1.11 Temporary Drainage Provisions
- 1.12 Erosion Control
- 1.13 Sanitary Facilities
- 1.14 Husbandry Practices
- 1.15 Water Quality Protection
- 1.16 KDOT traffic control information

PART 1 - GENERAL

1.1 General

The Contractor shall establish, provide, and initiate use of each temporary facility described herein at time first reasonably required for proper performance of the work. All temporary facilities shall be removed by the Contractor prior to final acceptance of the work.

1.2 Utilities

Unless specifically indicated elsewhere in the Contract Documents, Contractor shall be responsible for providing all electric, heat, power, water, telephone, sanitary and any other facilities required to perform the work.

1.3 Maintenance of Traffic

All public road traffic control shall be coordinated with the appropriate governing body. The Contractor shall conduct its work to interfere as little as possible with public travel, whether vehicular or pedestrian. Whenever it is necessary to cross or obstruct roads, driveways and walks, whether public or private, Contractor shall provide and maintain suitable and safe bridges, warning signs, detours, and/or other temporary expedients for the accommodation of public and private travel.

1.4 Barricades

- A. The Contractor is required to coordinate with the County Road Department, KDOT and/or any other entity having jurisdiction, to ensure that all streets, roads, highways, and other public thoroughfares which are obstructed by construction operations shall be protected by effective barricades on which shall be placed acceptable warning signs. Barricades shall be located at the nearest intersecting public highway or street on each side of the blocked section. For this project the contractor shall refer to KDOT Highway Sign Manual Fig. I3-2 attached at the end of this section.
- B. All open trenches and other excavations shall have suitable barricades, signs, and lights to provide adequate protection to the public. Obstructions such as material piles and equipment shall be provided with similar warning signs and lights.
- C. All barricades and obstructions shall be illuminated with warning lights from dusk to dawn. Material storage and conduct of the work on or alongside public streets and highways shall cause the minimum obstruction and inconvenience to the traveling public.
- D. All barricades, signs, lights, and other protective devices shall be installed and maintained in conformity with applicable statutory requirements and, where within the public rights-of-way, as required by the authority having jurisdiction thereof.

1.5 Fences

- A. All existing fences located inside the construction limits, shall be maintained by the Contractor until completion of the work. Fences which interfere with construction operations shall be removed and replaced as required for construction of the work. Fences shall not be dismantled until the landowner or renter is notified and provisions are made for any livestock.
- B. The Contractor shall provide temporary fences in areas where existing fences cannot be maintained due to construction operations.

1.6 Protection of Public & Private Property

- A. All existing site improvements, public or private, which are affected by construction operations shall be repaired or replaced to their original condition or better, whether within or outside the easement.
- B. The Contractor shall be responsible for all damage to streets, roads, highways, shoulders, ditches, embankments, culverts, bridges, and other public or private property, regardless of location or character, which is the direct or indirect result of an action or omission by the Contractor or Subcontractor in connection with the work on the Project. The Contractor shall make arrangements which are acceptable to the SMS, or the agency or authority having jurisdiction over the damaged property, concerning its repair or replacement or payment of costs incurred in connection with the damage.

1.7 Security

- A. The Contractor shall be responsible for protection of the site, and all work, materials, equipment, and existing facilities thereon, against vandals and other unauthorized persons.
- B. No claim shall be made against the landowner, tenant, or SMS by reason of any act of an employee or trespasser, and the Contractor shall make good all damage to landowner's property resulting from his failure to provide security measures as specified, except where damage is a result of a direct act of the landowner or tenant.

1.8 Roads

Contractor shall establish and maintain temporary access roads to various parts of the site as required to complete the Project. Such roads shall be available for the use of all others performing work or furnishing services in connection with the Project. All access roads within the site shall be reclaimed prior to the seeding in the same manner as graded spoils. All grades shall have a maximum slope of 4h:1v and a minimum slope of 2 percent after reclamation unless specified otherwise. The location of all proposed access roads shall require approval by the SMS prior to construction. Reclamation of all roads shall be required prior to approval of final payment.

1.9 Equipment and Materials Storage and Parking

Contractor shall provide and maintain suitable parking areas for the use of all construction workers and others performing work or furnishing services in connection with the Project, as required to avoid any need for parking personal vehicles where they may interfere with public or private traffic. Reclamation of all equipment and material storage and parking areas shall be required prior to approval of final payment.

1.10 Dust Control

The Contractor shall take reasonable measures to prevent unnecessary dust. Earth surfaces subject to dusting shall be kept moist with water or by application of a chemical dust suppressant. Dusty materials in piles or in transit shall be covered when practical to prevent blowing.

1.11 Temporary Drainage Provisions

- A. Contractor shall provide for water discharged from the site in performance of the work. Drainage facilities shall be adequate to prevent damage to the work, the site, and adjacent property from the discharge flow and/or sedimentation.
- B. Existing drainage channels and conduits shall be cleaned, enlarged or supplemented and diversions shall be constructed as necessary to carry all water entering the construction site away from areas of work activity.

1.12 Erosion Control

The Contractor is required to control erosion due to storm water runoff from construction operations. The Contractor shall initiate erosion control measures prior to the commencement of clearing, grading, excavation, or other operations that will disturb the natural protection. Work shall be scheduled to expose areas subject to erosion for the shortest possible time, and natural vegetation preserved to the greatest extent practicable.

1.13 Sanitary Facilities

- A. The Contractor shall furnish temporary sanitary facilities at the site, as provided herein, for the needs of all construction workers and others performing work or furnishing services on the Project.
- B. Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and reasonably obscured from public view. If toilets of the chemically-treated type are used, at least one toilet will be furnished for every 20 workers or fraction thereof.

1.14 Husbandry Practices

The Contractor shall maintain the project site free of all waste including used parts, used oil and containers, tires, and any other waste generated by construction activities. Contractor shall maintain entrances to site work in an orderly fashion and will be required to remove any excessive mud or clay deposited on public roads due to traffic from the construction site.

1.15 Water Quality Protection

A. Spill Prevention and Response

1. *Storage:* Fuel, chemicals, and other materials stored at the project site shall be stored in a manner that minimizes the discharge of product, either accidental or otherwise, to waters of the state. Storage containers shall not be located adjacent to or near any water ways (streams, rivers, ponds, etc.) or where sanitary drains exist and there is a potential that a release would come into contact with the waters of the state. The SMS must approve the location of any temporary product storage or equipment staging areas and may require construction of containment berms around storage areas.
2. *Security:* The Contractor shall be responsible for protection of the site, and all work, materials, equipment, and existing facilities thereon against vandals and other unauthorized persons.
3. *Waste Products from Fueling Processes:* Used filter/separator elements shall be containerized and disposed of properly. Water collected in filter/separator sumps must be collected and containerized for proper disposal. Product remaining in product delivery hoses must be collected and recycled or disposed of properly. Fuel drained from fuel/water separators must be collected and disposed of properly.
4. *Spill Control:* The Contractor shall avoid overfilling tanks by attending hoses and nozzles at all times, gauging tanks, and topping off containers at reduced rates. Equipment is to be inspected daily for leaks. Leaks are to be contained and repaired upon discovery.
5. *Spill response:* In the event of a spill, the contractor will be required to contain the spill by constructing a berm or dike. The source of the leak must be eliminated if feasible by using a wooden plug, repair putty, rubber matting, etc. Transfer the remaining product to a suitable container.

Contact the SMS either in person or by telephone (620-231-8540) and provide the following information.

- a. Identification of the caller.
- b. Identify the time and place the spill occurred or was first discovered.
- c. The type of material lost.
- d. The quantity lost.

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- e. Any unusual conditions that may contribute to the spread of the release, i.e. weather, terrain, etc.
- f. Any release near or into public waters, sewers, or other areas of concern.
- g. Which agencies have been notified.
- h. What action is being taken to remediate the spill.

The Contractor should then follow any further instructions for containment and clean up.

B. Fertilizer Runoff Control

Fertilizer is to be applied in accordance with manufacturer's instructions and only at rates necessary for vegetation needs. Once applied, fertilizer will be incorporated through discing to avoid losses due to inclement weather. Areas fertilized must be seeded and mulched within one week of fertilizer application.

1.16 1.16 KDOT Traffic Control Information
(see next page or KDOT Standard Drawing TE704)

END OF SECTION 1500

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SECTION 01600 - MATERIAL AND EQUIPMENT

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- 1.3 Delivery, Handling and Storage General Requirements
- 1.4 Transportation and Handling
- 1.5 Storage and Protection
- 1.6 Product Options and Substitutions

PART 1 - GENERAL

1.1 Related Documents

Drawings and general provisions of the Contract, including General and Special Conditions, other Division 1 Specification Sections, and all other Divisions of the Specifications, apply to work of this Section.

1.2 Products

- A. Products include material, equipment and systems.
- B. Comply with Specifications and referenced standards as minimum requirements.
- C. Components required to be supplied in quantity within a Specification Section shall be the same, and shall be interchangeable.

1.3 Delivery, Handling and Storage General Requirements

Materials shall be delivered to the site undamaged. Materials shall be handled and stored according to manufacturer's instructions and as required to prevent damage. Damaged materials shall be replaced by the Contractor at no expense to the Department.

1.4 Transportation and Handling

- A. Transport products by methods to avoid product damage; deliver in undamaged condition in manufacturer's unopened containers or packaging.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage.
- C. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.

1.5 Storage and Protection

- A. Materials and equipment may be stored inside the construction limits in locations approved by the Engineer. The Contractor shall use existing roads for access to the site. Additional roads may be built with the approval of the Engineer. All areas disturbed for equipment access and/or material storage must be reclaimed after final use.
- B. Store products in accordance with manufacturer's instructions, with labels intact and legible. Store sensitive products in weather-tight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions.

- C. For exterior storage of fabricated products, place on sloped supports aboveground. Cover products subject to deterioration with impervious sheet coverings; provide ventilation to avoid condensation.
- D. Store loose granular materials on solid surfaces in a well drained area; prevent mixing with foreign matter.
- E. Where not in place provide, install and maintain adequate barricades, guards or protection around excavations, utilities, hazards and other items to remain.
- F. Any existing privately or publicly owned structures, facilities, streets, curbs, walks, lawns, shrubs, trees, utilities, etc., that are damaged or removed due to required excavations or other construction work, shall be patched, repaired, or replaced and left in their original state of repair by Contractor, to satisfaction of Engineer, the Department and authorities having jurisdiction there over, at no additional cost to the Department.

1.6 Product Options and Substitutions

- A. Options
 - 1. Products Specified by Reference Standard: Any product meeting this standard.
 - 2. Products Specified by "similar and equal to" Preceding a Single Proprietary Name: Any product meeting specified requirements; named product complies with Specifications.
 - 3. Products Specified by "Basis of Design" preceding a Single Proprietary Name: "Similar and equal to" is implied unless additional manufacturer's characteristics of named product were used to design systems.
 - 4. Products Specified by Naming Products of Manufacturers, without qualification: Submit request for substitution for product or manufacturer not named.
- B. Only before the Contract Agreement is executed will Engineer consider requests from Contractor for substitutions. Subsequently, substitutions will be considered only when a specified product or material becomes unavailable or not practical due to no fault of Contractor, or the substitution is substantially to the Department's advantage (equal product for less life cycle cost or higher quality product at no change in the Contract sum).
- C. Whenever a material is specified or described using the name of a proprietary product or the name of a particular manufacturer or vendor, the specified item mentioned shall be understood as establishing the type, function, and quality desired. Other manufacturers' products will be accepted provided sufficient information is submitted to allow the Engineer to determine that the products proposed are equivalent to those named.
- D. Document each request for substitution with complete data substantiating compliance of proposed substitution with Contract Documents. Include:

1. Comparison of Qualities of proposed substitution with that specified including all points of difference.
 2. Samples, drawings, or engineering notes, where required or requested to show specific construction, finishes, etc.
 3. Availability of maintenance service and source of replacement parts.
 4. Changes required in other elements of the Work because of the substitution.
 5. Effect on Construction Schedule.
 6. Name and address of similar projects on which product was used and date of installation.
- E. Request constitutes a representation that Contractor:
1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
 2. Will provide the same warranty for substitution as for specified product.
 3. Will coordinate installation and make other changes which may be required for Work to be complete in all respects.
 4. Waives claims for additional costs which may subsequently become apparent.
- F. Substitutions will not be considered when they are indicated or implied on Shop Drawings or Product Data submittals without separate written Change Order proposal request.
- G. The Department, advised by the Engineer, will determine acceptability of proposed substitution.
- H. Contractor shall bear costs for architectural or engineering services required to check proposed substitute method or type of construction and, if accepted, to prepare record drawings.

END OF SECTION 01600

DIVISION 2 – SITE WORK

SECTION 02100
MOBILIZATION, SITE CLEARING & PREPARATION

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MOBILIZATION, SITE CLEARING & PREPARATION

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PART 1 - GENERAL

1.1 Description

A. Summary of Work

1. Mobilization, preparatory work and operations necessary for the movement of personnel, equipment, supplies and incidentals to and through the Project site; and the establishment of Contractor's offices, trailers and other facilities necessary for work on the Project.
2. Site Clearing & Preparation including protecting existing facilities, utilities, and vegetation to remain; clearing and grubbing; and debris removal and disposal.

B. Related Work

Section 02200: Earthwork

Section 02300: Drainage Systems

Section 02301: Temporary Sediment Control Measures

Section 02500: Fencing

Section 02700: Seeding

1.2 Quality Assurance

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. In addition to complying with requirements of governmental agencies having jurisdiction, comply with the directions of the SMS.

1.3 Site Conditions

- A. The Drawings do not purport to show all objects existing on the site.
- B. The Project Limits, whether shown on the Drawings or not, shall encompass all areas disturbed by Contractor's activities. Disturbed areas shall be kept to the smallest practical size yet be sufficient to properly perform the work. All disturbed areas shall be reclaimed.
- C. No work shall be performed under the drip line of trees that are to remain. The Contractor may request that certain trees within the Project Limits remain in place. If permission is granted by the SMS, the Contractor shall protect the tree(s) from damage.
- D. Materials to be handled under this Contract include, but are not limited to, soil, rock, spoil, gob, coal refuse, mud, and quantities of garbage and trash.
- E. Use of explosives is not allowed.

- F. Unless indicated otherwise in the Contract Documents or by the SMS, salvaged materials, such as fencing, culverts, tiling, signs, and other man-made improvements shall be considered to be property of the landowner. Salvaged materials shall be stored on site at locations to be determined by the SMS. Demolished materials shall either be removed from the job site or buried on site as approved by SMS.

1.4 Submittals

If an off-site disposal area is selected by the Contractor, submit area location.

PART 2 - PRODUCTS

2.1 Materials

Provide materials, not specifically described but required for proper completion of the work of this Section, as selected by the Contractor subject to the approval of the SMS.

PART 3 - EXECUTION

3.1 Surface Conditions

- A. In company with the SMS, visit the site and verify the extent and location of clearing and site preparation required. Completely remove items scheduled to be removed, leaving surfaces clean, solid, and ready to receive new materials specified elsewhere.
- B. All trees outside the Project Limits shall remain undisturbed.

3.2 Protection

- A. Protect existing utilities indicated or made known.
- B. Protection of existing vegetation: Protect tops, trunks, and roots of existing trees and/or shrubs, indicated or implied to remain, from damage during all operations. Do not permit heavy equipment or stockpiles within branch spread.

3.3 Clearing and Grubbing

- A. Perform clearing and grubbing only to the extent necessary to perform excavation, grading and other required work.
- B. Clearing includes removal and disposal of surface objects, except those which are permanent or are designated to remain; removal and disposal of all debris and rubbish; and felling and disposal of trees, brush and other vegetation. In cutting of timber growth, cuts shall be made such that all trees are felled into the area to be cleared. Exercise care when clearing near the Project Limits so as not to damage existing trees or vegetation to remain.
- C. Grubbing includes removal and disposal of subsurface objects, except those which are permanent or are designated to remain; and removal and disposal of tree stumps and roots

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larger than 3 inches in diameter. Backfill all excavated depressions with nearby soil or spoil material, compact to approximate density of adjacent undisturbed areas, and grade entire area to drain.

Note: clearing and grubbing on the existing dam shall be performed in a manner which results in minimal disturbance to the dam and minimizes removal of dam embankment materials. The use of dozers shall not be allowed to clear the vegetation on the existing dam embankment. Removal of all vegetation and trash shall progress up the face of the existing embankment and be completed prior to placement of geotextile fabric. Holes and depressions from tree and brush removal shall be immediately backfilled and compacted with on site fill materials.

3.4 Debris Removal and Disposal

- A. Remove debris, rubbish, and all waste materials resulting from the site clearing and preparation operations. Haul removed materials off-site to a licensed landfill or, if approved by KDHE, clean rubble as defined by K.S.A. 65-3402(w), except for asphalt and steel, may be buried on-site with a minimum of 2 feet of cover in approved locations.
- B. Some on-site surface disposal of vegetative waste materials may be allowed by the SMS and shall be done by creating brush piles for wildlife habitat. Brush piles shall not exceed 50 feet in diameter or 10 feet in height. The numbers and locations of brush piles shall be approved by the SMS. Brush piles may be located at the perimeter of the Project Limits or in water impoundments, but not in or immediately adjacent to public or private roads.
- C. Some on-site surface disposal of vegetative waste materials may be allowed by the SMS and shall be done by creating brush piles for wildlife habitat. Brush piles shall not exceed 50 feet in diameter or 10 feet in height. The numbers and locations of brush piles shall be approved by the SMS. Brush piles may be located at the perimeter of the Project Limits or in water impoundments, but not in or immediately adjacent to public or private roads.
- D. Contractor shall obtain necessary permits and comply with all regulatory agencies governing this work.
- E. Trash/Debris Disposal and Material Removal
 - 1. Trash and/or debris which must be removed from the sites shall be disposed of in an appropriate approved manner and KDHE regulations shall be followed by the Contractor.

In summary:

- a. Household trash as defined by KDHE regulations shall be taken to a landfill approved to accept such materials. Construction/Demolition (C & D) Debris as defined by KDHE regulations shall be taken to a disposal site approved to accept C & D materials. Proof (including weigh tickets and/or invoices) of proper disposal shall be submitted to the SMS.

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- b. Appliances (white goods), **except for appliances containing freon**, shall be crushed prior to loading for disposal.
- c. **Items suspected of containing freon shall be checked at the site prior to disposal.** All items for which there is any question concerning the amount of freon they may contain shall be taken to an approved freon recycling disposal point. If the appliance is missing the refrigeration equipment or otherwise definitely found not to be containing freon, it may be disposed of as "white goods" with other household trash.
- d. Tires shall be separated from the other trash and debris and taken to an approved disposal or recycling point.
- e. No burning will be allowed on any area of the site.

F. Hazardous Material Disposal

The Contractor shall promptly notify the SMS immediately upon discovery of, and prior to movement or disturbance of, any hazardous materials such as petroleum products, solvents, PCB=s, etc. The Contractor shall take all necessary precautions to protect personnel upon discovery of hazardous materials. The SMS will notify the appropriate agencies for proper disposal of the hazardous substances and any contaminated soils.

H. Scrap Metal

All scrap metals encountered during reclamation shall become the property of the Contractor for disposal. Scrap metal can include, but is not limited to machinery frames and parts, large diameter wire rope, miscellaneous equipment parts, culverts and pipe, and miscellaneous items.

3.5 Measurement and Payment

The construction cost of all work included in this Section of the Specifications shall be included in the Contractor's prices set forth in the Form of Bid for the work items described below. The lump sum price for each of these items shall include its pro rata share of overhead and shall constitute full payment to the Contractor for performance of the work included in this Section of the Specifications. Payment shall be considered full compensation for all materials, tools, labor, equipment, supervision and incidentals to perform the work included in this Section of the Specifications.

Measurement and payment for each work item in this Section shall be in accordance with the following:

- A. *Mobilization & Demobilization:* Payment for the cost of mobilization and demobilization and other work incidental thereto shall be included in the lump sum price set forth for "Mobilization & Demobilization." The lump sum price set forth in the Contractor's Form of Bid shall include full compensation for preparatory work and operations necessary for the movement of personnel, equipment, supplies and incidentals to and through the site; for

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the establishment of Contractor's offices, trailers and other facilities necessary for work on the project; for any cost item included in Division 1 - General Requirements not otherwise included in the bid items; for all other work or operations which must be performed or costs incurred when beginning or performing work on the project including bonding, insurance, obtaining permits, paying fees, etc.; and for removal of personnel, equipment, materials, supplies, offices, trailers, etc. from the site.

Payment shall be based on the lump sum price in the Form of Bid. **The price for mobilization and demobilization shall not exceed seven percent (7%) of the base bid.** Seventy percent (70%) of the mobilization/demobilization bid price may be paid on the first partial payment and the balance paid on the final payment with the approval of the Department and SMS. No additional payment shall be made for demobilization and remobilization due to shutdowns, suspensions of work, or for other mobilization activities. This will constitute full compensation for all labor, materials, equipment, and all other items necessary for, and incidental to, completion of the work.

- B. *Site Clearing & Preparation:* Payment for site clearing and preparation shall be based on the lump sum price stated in the Form of Bid. Payment shall be considered full compensation for furnishing the labor, materials, equipment, supplies and tools necessary for the removal and disposal of vegetation, debris, rubbish, hedge rows, brush, trees, slash, roots and any obstructions within the Project Limits.
- C. *Summary:* Schedule of Bid Items applicable to work covered by this Section are as follows:

<u>Description</u>	<u>Unit</u>
Mobilization & Demobilization	Lump Sum
Site Clearing & Preparation	Lump Sum

END OF SECTION 02100

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PART 1 - GENERAL

1.1 Description

A. Summary of Work

Excavate, haul, backfill, compact, and grade the site to the elevations shown on the Drawings, as specified herein, and as needed to meet the requirements of the Work shown on the Drawings. Work under this Section includes excavation, conveyance, placement and compaction of excavated materials; site grading; lime/mulch application after final grading; furnishing and placing rock fill; furnishing and placing roadstone; and removal of surface rock.

B. Related Work

Section 02100: Mobilization, Site Clearing & Preparation

Section 02300: Drainage Systems

Section 02301: Temporary Sediment Control Measures

Section 02500: Fencing

Section 02700: Seeding

1.2 Quality Assurance

- A. Use adequate numbers of skilled workmen for proper performance of the work.
- B. Use equipment adequate in size, capacity, and numbers to accomplish the work in a timely manner.
- C. Comply with requirements of all governmental agencies having jurisdiction and of the SMS.

1.3 Site Conditions

A. Nature of Work Site

- 1. Materials to be handled under this Contract include, but are not limited to, quantities of soil, rock, spoil, mud, gob, and coal refuse.
- 2. The Project site is situated in an area where underground mining may have been conducted. There is a possibility that hidden mine drifts or shaft openings are present on the site. Contractor shall exercise reasonable caution in recognition of this potential hazard, and shall notify the SMS immediately upon his discovery of any openings. If funding permits, sealing of openings may be incorporated into this Contract through the issuance of change orders, as required.
- 3. During excavation in existing spoil piles, Contractor shall recognize the possible existence of cavities or smoldering fires and, if encountered, shall notify the SMS promptly. The Contractor shall exercise caution and be prepared to take appropriate

action since accelerated combustion may occur. All burning materials shall be extinguished before being covered or incorporated as fill.

4. Lime is a caustic material. Contractor shall instruct his workers in the proper handling of lime and take all necessary steps and precautions to protect his personnel and the general public.
5. When working across and/or along public roads, proper warning signs and other precautions needed to protect the public shall be provided by the Contractor.
6. **Lines on the drawings representing existing buried utilities may not be accurate and will require hand excavation by the contractor to determine the exact location and depth of these utilities prior to any excavation with heavy equipment.**

B. Earthwork Balance

1. The Contractor shall move mine spoil, as well as salvage and reuse any materials suitable for topsoil, as required to obtain the grades and general drainage requirements shown on the drawings.
2. Any material excavated and removed for the construction of the rock structures shall be used as fill.

1.4 Permits and Fees

Obtain any permits required. Pay all fees.

1.5 Submittals

- A. Agricultural lime certification: Submit certificates of lime analysis by an approved laboratory or manufacturer's/vendors certified analysis for ECC (Effective Calcium Carbonate) and supplier's name and location.
- B. Roadstone: Submit certification from supplier that materials furnished meet the Specifications.
- C. Rock Fill: Submit certification from supplier that materials furnished meet the Specifications.
- D. Weigh tickets and/or shipping tickets of all materials delivered to the site for the work in this Section.

1.6 Site Disturbances

- A. Take precautions to insure that equipment and vehicles do not unnecessarily disturb or damage existing grading or other site improvements.

- B. Repair any damage caused to off-site areas, and return these areas to original condition at no cost to the Department.

PART 2 - PRODUCTS

2.1 Fill Materials

- A. Unclassified excavated material shall be obtained on-site from required cut operations. Remove rocks that will hinder seedbed preparation or will impede mechanical mowing of the reclaimed site.
- B. Obtain laboratory tests in order to establish the moisture density relationship for structural fill and backfill materials. Obtain field density tests in order to verify that compaction levels are obtained for structural fills and backfills. Field density tests shall be performed in locations approved by the SMS. All tests shall be conducted by an approved laboratory.

2.2 Sheepsfoot Roller

Tamping or sheepsfoot rollers shall consist of metal rollers, drums, or shells surmounted by metal studs with tamping feet projecting not less than 6.5 inches from the surface of the roller, drum, or shell. Tamping feet shall be spaced not less than six inches, nor more than twelve inches measured diagonally center to center; and the cross-sectional area of each tamper foot, measured perpendicularly to the axis of the stud, shall not be less than four nor more than twelve square inches. The weight of the tamping rollers shall be such that when fully loaded, the load on each tamper foot shall be not less than 200 pounds per square inch of cross-sectional area.

2.3 Agricultural Lime

Agricultural lime shall be ground calcitic limestone conforming to the current requirements of the Kansas Agricultural Liming Act. The lime shall have effective calcium carbonate (ECC) of at least 50 percent per bulk ton of lime to be applied. Refer to KDOT Section 2105.

2.4 Mulch

Mulch shall consist of wheat, oat, rye straw or milo stubble. Mulch shall be air-dried, properly cured and harvested. Straw harvested after a killing frost or during dormant periods will not be accepted. Discolored, weathered, rotted, brittle, moldy, caked or otherwise degraded material is acceptable (for lime/mulch incorporation only; not for seeding mulch), provided the mulch is not so decomposed as to prevent it from being readily handled and uniformly spread. Mulch shall be free of published noxious weeds and other weeds deemed undesirable by the SMS, such as foxtail, Johnson Grass, sericea lespedeza, etc.

2.5 Roadstone

- A. Roadstone for surfacing shall be KDOT approved crushed stone aggregate for base construction, Type AB-3 (KDOT Section 1105). Roadstone shall be a combination of crushed stone, crushed or uncrushed gravel, or limestone gravel, and shall be free from

- weeds, sticks, grass, roots and other undesirable material. Sand or sand-gravel bedding is not allowed.
- B. Roadstone installations shall be similar to KDOT AB-3 aggregate and shall consist of at least 85% limestone or dolomite produced by mechanical crushing and shall conform to the following size requirements:
- | | |
|--------|------------------------------|
| 0-5% | retained on 1-1/2 inch sieve |
| 5-30% | retained on 3/4 inch sieve |
| 35-60% | retained on #4 sieve |
| 45-70% | retained on #8 sieve |
| 60-84% | retained on #40 sieve |
| 80-92% | retained on #200 sieve |
- C. Acceptance of all bedding material shall be based on certification from the supplier that the bedding material supplied conforms to these specifications and on visual inspection by the SMS at the job site.

2.6 24" Light KDOT Riprap Aggregate

- A. Rock used for fill shall be free from earth, soapstone, shale, shale like, or other easily disintegrated (friable, weathered, and/or deteriorated) material that will tend to decrease the durability of the material after placement. Stone shall consist of quarried limestone, dolostone, quartzite sandstone, and/or calcite cemented sandstone rock. The stone and shall be sound, durable and angular or block in shape.
- B. Rock fill materials shall be well graded to produce a tight fill. Fill shall be similar to KDOT 24" light riprap and/or KDOT ¼ Ton heavy series riprap. The stone quality and size shall conform to the requirements specified in the KDOT Standard Specifications for State Road and Bridge Construction, Materials Division, Subsection 1116 – Stone for Riprap.

PART 3 - EXECUTION

3.1 Surface Conditions

Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

3.2 Elevations And Lines

- A. Limits of grading shall be as shown on the Drawings, or as approved by the SMS. Minor refinements to the grading limits and elevations shown on the Drawings will be done by mutual agreement, in the interest of the project and based on field conditions, at no additional cost to the Department. It is the intent that the extent of these refinements, if any, be offsetting so that there is no significant increase or decrease in the Project work.

- B. Final grades shall be such that the intent of the grading plan as shown on the Drawings is met. Ensure positive drainage in all areas.

3.3 Care of Water

- A. The Contractor shall be responsible for providing temporary measures during construction to control water pollution through the use of berms, dikes, dams, filter mats, netting, mulches, grasses, hay bales, sediment basins, and other erosion and sediment control devices or methods.
- B. The temporary pollution control provisions herein shall be coordinated with the permanent erosion and sediment control features specified elsewhere in the Contract to the extent practical to assure economical, effective and continuous erosion control.
- C. Provide and maintain at all times during construction, ample means and devices with which to promptly remove and dispose of all water from every source entering the excavations or other parts of the work. Dewater by means which will insure dry excavations and the preservation of the final lines and grades or bottoms of excavations. Discharge to approved drains and channels in accordance with any NPDES Permit requirements.
- D. Drainage facilities shall be adequate to prevent damage to the work, the site, and adjacent property and prevent flooding. Existing drainage channels and conduits shall be cleaned, enlarged or supplemented as necessary to carry all increased runoff attributable to Contractor's operations.

3.4 Preservation of Topsoil

- A. Topsoil consists of earthy surface material containing sod, non-objectionable roots, and other organic material.
- B. Topsoil shall normally consist of the top 12 inches of soil in undisturbed areas. All topsoil encountered during earthwork operations shall be salvaged and replaced following rough grading.
- C. Topsoil, when available, shall be used in the top 12 inches of final grades and replaced over areas disturbed by borrow and/or construction operations.

3.5 Excavation

- A. Excavate material encountered within the limits of the Work to the lines, grades, and elevations indicated on the Drawings and/or as specified herein. All material excavated shall be considered unclassified excavation (KDOT 204.02(d)). Any excess excavation shall be backfilled and compacted to grade.
 - 1. Contractor shall perform at least three hand exploratory excavations in the cut areas to locate the existing buried utilities prior to any heavy equipment work is done. The cost of these holes will be paid at the unit price per hole on the Form of Bid.

B. Excavation of Rock

1. Where rocks, boulders, or similar materials are encountered, and where such materials cannot be removed or excavated by conventional earth moving or ripping equipment, cease operations in these areas and promptly notify the SMS.
2. Do not use explosives without written permission from the SMS.

C. If potential acid-producing material, such as coal or pyritic shale, is encountered during earthwork operations, notify the SMS at once. Potentially acid-producing materials shall be excavated and buried beneath 4 feet of fill in locations approved by the SMS.

D. Excavate and fill in a manner and sequence that will provide proper drainage at all times.

E. Unauthorized Excavation

1. Unauthorized excavation consists of removal of materials beyond indicated elevations or dimensions without specific instructions from the SMS.
2. Backfill and compact unauthorized excavations as specified for authorized excavations, unless otherwise directed by the SMS.

F. Stability of Excavations

1. Slope sides of grading and undercut excavations to 1 horizontal to 1 vertical or flatter, as required for slope stability. Steeper slopes may be allowed provided OSHA requirements are met.
2. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.

3.6 Fills and Backfills - Minimum Compaction

- A. Continuously plow, step, bench, or break up sloped ground surfaces upon or against which fill is to be placed in such a manner that the fill material will bond with the existing surface.
- B. Uniformly place fill materials in lifts not exceeding a thickness of 24 inches in loose depth. Compact each lift with a minimum of three (3) passes of loaded, rubber-tired construction equipment, a sheepsfoot roller conforming to the requirements set forth in 2.2 of this Section, or by routing the spreading and hauling equipment to achieve uniform compaction.
- C. If, in the opinion of the SMS, adequate compaction is not being achieved, the Contractor shall remedy the situation and shall modify his subsequent lift thicknesses and/or compaction methods to the satisfaction of the SMS.

- D. Materials containing a substantial percentage of cobbles, boulders and other debris which do not break up during placement and compaction are to be placed at depths greater than one (1) foot below the anticipated final grade shown on the Drawings.
- E. The method of placing fill below water shall be selected by the Contractor such that future settlement of these materials is minimized insofar as practicable. Prior to initiating fill below water, secure SMS's acceptance of Contractor's method to achieve desired result. Any excessive mud shall be disposed of in a manner suitable to the SMS.
- F. No compaction of the top 12 inches of fill is required. Care shall be taken to minimize compaction of the final surfaces to enhance revegetation success.

3.7 Structural Fills and Backfills - High Compaction

- A. When frozen material exists in either the surface of the original ground or the surface of a partially constructed fill, work shall not proceed until such time that the material has been thawed or removed in a manner that is approved by the SMS.
- B. The subgrade on which structural fill is to be placed shall be free of rocks, vegetation and debris which may inhibit compaction.
- C. Scarify surface on which structural fill is to be placed by plowing or discing to a minimum depth of 6 inches. On slopes steeper than 4:1, benches are required. Subgrade must be approved by the SMS prior to placement of fill materials.
- D. Materials to be placed in a structural fill shall be approved by the SMS. Fill material shall be free from excessive rocks, roots, debris and other undesirable material. Fill shall be chiefly composed of a cohesive soil material conducive to compaction.
- E. Wet or dry the fill material for compaction to a uniform moisture content within 3 percent of optimum as determined by soil tests. SMS shall approve moisture content of fill prior to compaction.
- F. Place fill materials on a prepared surface in 12 inch loose lifts if the material is to be compacted by a roller. For material which is to be compacted by hand equipment, such as trench backfilling for pipe installations, place materials in 6 inch loose lifts. Spread fill material to obtain a uniform layer to be compacted.
- G. Compact general structural fill using a roller conforming to the requirements in 2.2 of this Section. Compact structural backfills for pipe work using tampers, e.g., Wackers; vibratory plate compactors are not approved for use. All other types of compaction equipment shall be subject to the approval of the SMS.
- H. Each lift shall be compacted to 95% of the standard Proctor density as determined by soil tests, or until the roller rides on top of the compacted layer without penetration.

3.8 Grading

- A. All disturbed areas within the Project Limits, including excavated and filled sections, and adjacent transition areas, shall be reasonably smooth and free from irregular surface changes.
- B. Each lift is to be graded to remove mounds and ridges caused by dumping operations and to obtain uniform thickness prior to and during compacting.
- C. Provide roundings at top and bottom of banks and at other breaks in grade and carry final grades to existing contours such that there is a smooth transition with no ponding.
- D. Remove and dispose of all surface rocks which are larger than 9 inches in any dimension. Rocks shall be disposed of in an approved location.
- E. The final grade shall drain readily.

3.9 Lime/Mulch Application

- A. All final grades within the Project Limits shall receive a lime/mulch treatment which shall consist of thoroughly incorporating a mixture of agricultural lime and mulch within the upper 12 inches. Only after final grades have been achieved can the lime/mulch work proceed in those areas.
- B. Application of lime/mulch will not be permitted during adverse climatic conditions such as high winds or excessive moisture in the surface to be treated, nor if rain is predicted or reasonably expected within the time the Contractor estimates will be required for him to apply and incorporate the lime/mulch within the area approved.
- C. After SMS approval, evenly apply agricultural lime at a rate specified by the SMS in the field, and 3 tons per acre of mulch directly on the surface to be treated. Incorporate the lime/mulch into the upper 12 inches of material the same day the lime and mulch are applied. Minimize compaction. For bidding purposes, a neutralization lime application rate of 3 tons of per acre was used. The SMS will test the site prior to application to determine the exact rate.
- D. Lime and mulch shall be spread uniformly by mechanical spreader. Lime and mulch application in small areas or in areas of difficult machine access, as approved by the SMS, may be done by hand methods, and the lime and mulch may be incorporated using a large garden tiller set to maximum depth not exceeding 12 inches.

3.10 Roadstone

- A. Uniformly spread stone over the area to be surfaced. Level the stone, add water if necessary to facilitate compaction, and compact with rubber-tired construction equipment. Correct subsequent settled or rutted areas by redressing, addition of more roadstone if necessary, and recompacting.

3.11 Rock Embankment

- A. Rock fill will be used to construct rock toes. It will also be used for other applications specified and approved by the SMS.
- B. Rock toe construction is a special SMS provision for improving road embankments along areas of standing water. The rock fill is intended to anchor the toe of the embankment while providing protection against erosion from wave action. Rock toes will be constructed according to the lines and grades shown on the Construction Drawings. After a rock toe has been installed at the base of the embankment, the slopes will be filled to the finished grade under the provisions for general earthwork.

Rock toes can be constructed along the edge of standing water or they can be constructed across a section of standing water. Dewatering and standard compaction provisions will not apply to the construction of rock fills unless otherwise specified in the plans. In a typical application, the rock will be delivered by truck at one end of the fill. Then the rock fill will gradually be extended across to the other side using a combination of track-mounted equipment.

3.12 Maintenance

- A. Protection of newly graded areas.
 - 1. Protect newly graded areas from traffic and erosion and keep free from trash and debris.
 - 2. Repair and reestablish grades in settled, eroded, and rutted areas.
- B. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify the surface, reshape, and compact prior to further construction.
- C. Maintain new and existing ditches free from detrimental quantities of sediment, leaves, sticks, trash, and other debris during execution of the Work.

3.13 Measurement and Payment

The construction cost of all work included in this Section of the Specifications shall be included in the Contractor's prices set forth in the Form of Bid for the work items described below. The price for each of these items shall include its pro rata share of overhead, and shall constitute full payment to the Contractor for performance of the work included in this Section. Payment shall be considered full compensation for all materials, tools, labor, equipment, supervision and incidentals to perform the work included in this Section of the Specifications.

Measurement and payment for each work item shall be as follows:

- A. *Earthwork*: The lump sum price for this work item shall include full payment for all excavation, conveyance, placement, compaction, grading, care of water, and other work incidental thereto as required to complete the Project in accordance with requirements of the Drawings and these Specifications. There will be no measurement and payment for over excavation or unauthorized excavation.
- B. *Mulch - Earthwork*: The Contractor's lump sum price for mulch applied after final grading shall represent full payment for material furnishing, delivery, application and incorporation as per these Specifications. Submittals required under Part 1 must accompany each shipment of agricultural lime.
- C. *Lime - Earthwork*: The Contractor's unit price per ton for lime applied after final grading shall represent full payment for material furnishing, delivery, application and incorporation as per these Specifications. Submittals required under Part 1 must accompany each shipment of agricultural lime.
- D. *Roadstone*: The Contractor's unit price for roadstone shall include all materials and work required for installation of the roadstone in accordance with these Specifications and as shown on the Drawings. Measurement for payment shall be based on the tonnage of roadstone actually installed as determined from weigh tickets, rounded to the nearest 0.1 ton. Only material placed in accordance with the Drawings and these Specifications shall be measured and paid.
- E. *Rock Embankment*: The Contractor's unit price for KDOT 24" Light Riprap Aggregate shall include all materials including geotextile fabric and work required for installation of the KDOT 24" Light Riprap Aggregate in accordance with these Specifications and as shown on the Drawings. Measurement for payment shall be based on the tonnage of KDOT 24" Light Riprap Aggregate actually installed as determined from weigh tickets, rounded to the nearest 0.1 ton. Only material placed in accordance with the Drawings and these Specifications shall be measured and paid.
- F. *Summary*: Bid Items applicable to work covered by this Section are as follows:

<u>Bid Item</u>	<u>Unit</u>
Earthwork	Lump Sum
Mulch – Earthwork	UP
Lime – Earthwork	Ton
Roadstone	Ton
24" Light KDOT Riprap Aggregate	Ton

END OF SECTION 02200

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SECTION 02201

PIT DEWATERING AND CARE OF WATER

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PART 1 - GENERAL

1.1 Description

A. Summary of Work

This Section includes requirements for dewatering existing pits and ponds that are to be partially or completely filled, for control of sediment and mud in the bottom of pits, for handling muck which is or becomes exposed, and for constructing cofferdams.

B. Related Work

Section 02100: Mobilization, Site Clearing & Preparation

Section 02200: Earthwork

Section 02300: Drainage Systems

Section 02301: Temporary Sediment Control Measures

Section 02500: Fencing

Section 02700: Seeding

1.2 Quality Assurance

- A. Use adequate numbers of skilled workmen for proper performance of the work of this Section.
- B. Use equipment adequate in size, capacity, and numbers to accomplish the work in a timely manner.
- C. Comply with requirements of all governmental agencies having jurisdiction and with directives of the SMS.

1.3 Site Conditions

- A. All site areas include pits and/or ponds which require partial dewatering to allow reclamation to take place.
- B. Depending on weather conditions prior to and during construction, water surface elevations of pits and ponds may differ from those shown on the Drawings. In addition, the number of ponds may be more or less than shown on the Drawings. All water bodies existing at the time of construction, whether shown on the Drawings or not, which are within areas to be graded shall be dewatered in a controlled manner. For water bodies which are shown to be partially filled, only those portions requiring fill need to be dewatered.

1.4 Submittals

- A. If riprap is used, certification from supplier that the riprap meets the Specifications.

PART 2 - PRODUCTS

2.1 Materials

- A. Unless specified as a rock cofferdam on the Drawings, all cofferdams shall be constructed of soil or clayey spoils so as to be relatively impervious under the hydraulic head anticipated.
- B. Rock used for fill in cofferdams, shall be constructed of riprap or, if approved by the SMS, alternate rock. Riprap shall be Class Light 18" conforming to the quality, deleterious substances, and size requirements of KDOT Section 1114, Stone for Riprap. Alternate rock shall consist of shot rock which has been processed, at a minimum, to remove excessive amounts of fines. The rock shall be from a limestone formation capable of producing KDOT-approved aggregates. Approval to use alternate rock must be obtained from the SMS prior to any delivery of the rock to the site.
- C. Approval of alternate rock will be based on the SMS' visual acceptance of the rock in a stockpile at the quarry, prior to loading. If, after approval, alternate rock being delivered to the site later becomes unacceptable to the SMS due to poor gradation or excessive top size, fines, soft rock, or deleterious substances, or for any other reason, the SMS reserves the right to disallow continuance of the suspect product. The Contractor shall then remedy the objection, seek approval of an alternate source of other rock, or provide approved riprap as specified in B above.

2.2 Pumps

- A. Pumps to remove water shall be of sufficient size and capacity to efficiently dewater all water bodies within a reasonable time.

2.3 Hoses

- A. Hoses shall be of adequate size for efficient pumping and of sufficient length to extend from the pump to the receiving pond. The end of suction hoses shall be screened to prevent fish from entering the hose.

PART 3 - EXECUTION

3.1 General

- A. The Contractor shall provide an adequate number of pumps of sufficient capacity to rapidly dewater the various water bodies. Outlet hoses shall extend to receiving ponds and positioned to avoid erosion.

3.2 Cofferdams

- A. Prior to, or after the water has been removed from the pit, as the case may be, cofferdams shall be constructed across the pit at locations shown on the Drawings, supplemented by intermediate cofferdams at locations selected by the Contractor and/or as directed by the SMS.

These cofferdams are to section off the mud in confined areas and to prevent an excessive amount of muck from migrating into ponds which are to remain.

- B. Construction of cofferdams shall consist of placing material across the pit area to an elevation of no less than 12 inches above the mud level, or above the water surface, as the case may be. The rock cofferdams required at the North and South Areas shall be constructed as shown on the Drawings.

3.3 Dewatering

- A. Water bodies shall be dewatered by pumping, by crowding out the water using a soil or spoil windrow (provided conditions listed in these Specifications are met), or by such other method proposed by the Contractor which is acceptable to the SMS.
- B. Any water body requiring dewatering may be dewatered by pumping. Pumping operations shall not cause erosion or sedimentation downstream, and discharges shall be within all NPDES requirements and DWR dewatering permit requirements.
- C. Dewatering may also be accomplished by crowding out the water (within a pond or within a cell created by cofferdams), utilizing a windrow of dry soil or spoil, provided both of the following conditions are met:
 - 1. Excessive amounts of muck or sediment are not allowed to travel into drainage channels, streams, or ponds which are to remain, or to leave the site.
 - 2. Discharges are within all NPDES requirements and DWR dewatering permit requirements.

In the event either of these conditions is not met, Contractor shall be required to dewater by pumping, or by such other method approved by the SMS.

3.4 Fill Initiation in Ponds and Wet Areas

- A. The sites contain pit ponds, as well as other ponds and wet and swampy areas, into or upon which fill must be placed. Depending on the time of year, depressed areas may also contain ponded water. Filling operations in ponds and wet areas shall meet the requirements set forth below.
- B. The method of initial fill placement shall be selected by Contractor such that future settlement of these materials is minimized insofar as practicable. Prior to initiating fill placement, secure SMS acceptance of Contractor's method to achieve the desired result which is to permit subsequent filling operations to proceed in a stable manner.
- C. In shallow, swampy or sediment-laden areas, an acceptable method is to push out bottom muck by dozing in dry material from one end towards the other. Contractor may have to periodically allow the muck time to drain, perhaps several days, during which time work may continue elsewhere prior to resuming mucking operations.

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PIT DEWATERING AND COFFERDAMS

- D. In deeper, swampy or sediment-laden areas, if the above method is not practical and the area requires at least 5 feet of fill to reach final grades, Contractor may attempt to bridge over the muck with an initial lift not exceeding 4 feet in thickness. Subsequent lifts shall then be placed and compacted in accordance with Section 02200.
- E. In areas where ponded water exists, and after dewatering in accordance with Item 3.3 above, any one of the following methods is acceptable:
 - 1. Crowd out muck in bottom by dozing in dry material from one end towards the other allowing time, perhaps several days, for the muck to periodically drain.
 - 2. Push in dry material and intermix with muck until stable.
 - 3. Use cell method to isolate smaller zones within the area to be filled. The cell method consists of constructing cofferdams of a width no more than is required for a dozer to properly construct them. The cofferdams should be spaced apart to suit conditions. Cells created by cofferdams can then be worked as per one of the above 2 methods. Alternately, for areas where at least 5 feet of fill is required to reach final grades, Contractor may attempt to bridge over the muck with an initial lift not exceeding 4 feet in depth. Subsequent lifts shall then be placed and compacted per Section 02200. If bridging is impractical, continue mucking operations per one of the above 2 methods, or first add another intermediate cofferdam.
- F. During fill initiation activities, all muck which accumulates above the fill, or onto existing grades, shall be handled by the Contractor. Allow muck to drain, then push, or load and haul muck to an area which is to receive fill and which is acceptable to the SMS. In no event shall muck be placed in any area unless at least 2 feet of subsequent dry fill is placed above it for each 6 inches of "semi-dried," stable muck. Spread muck out to dry. Periodic turning over of the spread-out muck, or mixing with additional dry material, may be necessary to expedite drying. Subsequent filling shall not take place until the muck has dried sufficiently so as to permit proper filling thereon.

3.5 Measurement and Payment

- A. Payment for dewatering pits and ponds, constructing earthen or spoil cofferdams, initiating fills, and handling muck shall be included in the Contractor's lump sum bid for Earthwork (Section 02200), quoted in the Form of Bid. Payment shall be considered full compensation for materials, labor, equipment, tools and supplies necessary to complete the work. Fees for a dewatering permit from the State of Kansas, Agriculture Board, Division of Water Resources (DWR), shall also be included in the lump sum bid for Earthwork (Section 02200).

END OF SECTION 02201

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PART 1 - GENERAL

1.1 Description

A. Summary of Work

Work under this Section includes the care and control of water during construction. Work under this Section also includes the complete installation, including excavation, backfill and compaction, of all pipes, riprap, drainage control structures, and erosion control mat.

B. Related Work

Section 02100: Mobilization, Site Clearing & Preparation

Section 02200: Earthwork

Section 02271: Temporary Sediment Control Measures

1.2 Quality Assurance

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Use equipment adequate in size, capacity, and numbers to accomplish the work in a timely manner.
- C. Comply with requirements of governmental agencies having jurisdiction and of the SMS.

1.3 Site Conditions

Drainage work will generally involve installation of materials on finished sub grade. Surface flow of rainwater may be considerable should precipitation occur during construction of these items.

1.4 Submittals

- A. Submit certification from supplier that materials furnished meet the specifications for rock riprap, bedding for riprap, channel rock, and pipe.
- B. Submit manufacturer's certifications, product data, and installation instructions for geotextile fabric, pipe, and erosion control mat.

- C. Submit weigh and/or shipping tickets for all materials delivered to the Project site for the work of this Section.

PART 2 - PRODUCTS

2.1 Heavy Rock Riprap

- A. Stone for riprap shall be free from earth, soapstone, shale, shale like, or other easily disintegrated (friable, weathered, and/or deteriorated) material that will tend to decrease the durability of the material after placement. Stone shall consist of quarried limestone, dolostone, quartzite sandstone, and/or calcite cemented sandstone rock. The stone shall be sound, durable and angular or block in shape.
- B. Rock riprap materials shall be well graded to produce a tight fill. The fill shall be similar to KDOT 18" light riprap. The stone quality and size shall conform to the requirements specified in the KDOT Standard Specifications for State Road and Bridge Construction, Materials Division, Subsection 1116 - Stone for Riprap. The rock shall meet the following size criteria:

D ₁₀₀	=	18.00 inches
D ₈₅	=	15.94 inches
D ₅₀	=	12.00 inches
D ₂₀	=	6.00 inches
D ₁₅	=	5.02 inches
D ₁₀	=	4.20 inches
D ₀	=	2.40 inches

Other rock, with sizing and gradation similar to the KDOT specifications, may be used if approved by the SMS engineer prior to and during placement to insure a satisfactory installation. The Contractor may have to use additional material and/or special placement methods to obtain a job satisfactory to the SMS when using this material.

- C. The rock shall be free from cracks, seams or other defects that would tend to increase its deterioration from natural causes.
- D. The material shall contain a combined total of not more than one percent (1%) by weight of earth, sand, shale and non-durable rock.
- E. Acceptance of rock not conforming to the KDOT specifications shall be based on visual inspection by the SMS at the job site.

2.2 Ditch Liner Stone

- A. Channel Rock for channel lining shall be KDOT approved crushed stone for aggregate ditch lining, D₅₀=6" (KDOT Section 1114.2.b). Channel Rock shall be a combination of crushed stone, crushed or uncrushed gravel, or limestone gravel, and shall be free from weeds, sticks, grass, roots and other undesirable material.

- B. Channel Rock aggregate shall consist of at least 85% limestone or dolomite produced by mechanical crushing and shall conform to the following size requirements:

0%	retained on 10 inch sieve
15%	retained on 8 inch sieve
50%	retained on 6 inch sieve
85%	retained on 3 inch sieve
Maximum Size 12"	

- C. Acceptance of all channel rock shall be based on certification from the supplier that the channel rock supplied conforms to these specifications and on visual inspection by the SMS at the job site.

2.3 Geotextile Fabric

- A. Geotextile filter fabric used as under laying for riprap shall consist of non-woven polypropylene. The fabric shall meet the following minimum values:

Grab Tensile Strength	205 lbs.
Puncture Strength	130 lbs.
Trapezoidal Tear	80 lbs.
Apparent Opening Size (US Sieve)	80

The fabric shall be Mirafi 180 N, or SMS approved equal.

- B. The fabric shall not be exposed to sunlight for more than 2 weeks.
- C. The fabric shall be installed in strict compliance with manufacturer's instructions.

2.4 Erosion Control Mat

- A. Temporary or Semi-Permanent

1. Erosion control mat (blankets) used to retard erosion and establish natural vegetation shall be machine-produced, high-velocity mat composed of 100% wood excelsior, coconut, a straw/coconut combination, or a wood/coconut combination, stitched or glued to synthetic netting (on both sides) having an approximate mesh size 3/4 inch x 3/4 inch. The netting shall be made of nylon or polypropylene with ultraviolet additives to reduce breakdown.

Erosion control mat shall be North American Green Types C125 or SC150, American Excelsior Hi-Velocity Curlex (min. weight 72 lbs. @ 400 sq. ft), or SMS approved equal.

- B. Permanent and Turf Reinforcement Mat (TRM)

Permanent type erosion control mat (blankets) used to retard erosion and establish natural vegetation shall be machine-produced, high-velocity mat composed of 100% synthetic fiber, or a wood/coconut combination, stitched or glued to synthetic netting (on both sides) having an approximate mesh size 3/4 inch x 3/4 inch. The fiber and netting shall be made of nylon, polypropylene, and/or polyethylene terephthalate (PETE) with any necessary ultraviolet additives to reduce breakdown. Permanent erosion control mat, or TRM, shall be American Excelsior Company RECYCLEX - TRM, or SMS approved equal.

- C. Wooden anchor stakes shall be tapered hardwood, at least 12 inches long. Tapered hardwood stakes are available through North American Green (800-772-2040) and various suppliers such as A.S.P. Enterprises (816-941-9610; 800-519-2304).
- D. Wire anchor staples shall be in accordance with the specific erosion control blanket manufacturer's recommendations for the proper installation of the blanket for the conditions and location of use.
- E. Overlapping blankets shall be fastened together according to the manufacturer's recommendations. All such materials shall be of manufacturer's original quality and condition at the time of installation.
- F. Staple, or anchor stake, spacing shall be in accordance with the specific erosion control blanket manufacturer's recommendations for the proper installation of the blanket for the conditions and location of use.
- G. Staples for installation of erosion control mat shall be of wire (diameter).091 inches or greater, U-shaped with 9-inch legs and 1-inch groin.

PART 3 - EXECUTION

3.1 Protection

Protect previous construction from damage while constructing drainage systems. Protect drainage systems from damage during subsequent construction in other areas.

3.2 Care of Water

Furnish and operate sufficient pumps and/or provide other means including materials, labor and equipment to prevent interference to any work by water, ice or snow. No structure or pipe shall be laid in water or on snow or frozen ground, and no water shall be allowed to run into or over any work or pipe until installation is capable of accepting water without damage or deterioration. Damage of any kind resulting from insufficient pumping facilities or similar lack of proper conduct of the work shall be corrected by the Contractor at his own expense.

3.3 Flow Lines and Grades

- A. Construct drainage systems precisely to lines and grades as shown on the Drawings or as required for proper functioning.
- B. On channels, match flow lines and provide smooth transitions to avoid falling or ponding water at both inlet and outlet ends.

3.4 Erosion Control Mat Installation

- A. Erosion control mat shall be installed in the areas shown on the Drawings and shall be installed in accordance with manufacturer's recommendations.
- B. The area to be covered shall be graded smooth, limed, fertilized and seeded prior to installation of the erosion control fabric.
- C. Erosion control mat shall be rolled down over slopes without stretching or pulling so that the mat is allowed to lay smoothly on the soil surface. The top end of each section will be buried in a narrow 6-inch deep trench. Top roll will overlay 12 inches over the top of bottom rolls. Four inch overlaps will be provides between adjacent sections.
- D. Staples shall be installed per the erosion control mat manufacturer's recommendations. On outside edges and overlaps, staples shall be spaced at no greater than 36-inch intervals in any direction.

3.5 Measurement and Payment

The construction cost of all work included in this Section of the Specifications shall be included in the Contractor's prices set forth in the Form of Bid for the work items described below. The lump sum or unit price for each of these items shall include its pro rata share of overhead and shall constitute full payment to the Contractor for performance of the work included in this Section of the Specifications.

Measurement and payment for each work item in this Section shall be in accordance with the following:

- A. *Ditch Lining Stone:* The unit price bid per ton for riprap (either riprap or ditch liner stone) shall be considered full payment for channel excavation and grading, and installing (only) channel lining rock, geotextile fabric, bedding, laying and anchoring the underlying geotextile fabric mat, along with all materials, labor, equipment, tools, and incidentals necessary to produce a completed job to the lines shown on the Drawings. Geotextile Fabric will not be measured for payment separately.
- B. *Erosion Control Mat:* The unit price bid per square yard of erosion control mat installed shall be full compensation for furnishing, laying and anchoring the mat, along with all materials, labor, equipment, tools, and incidentals necessary to produce a completed job to the lines shown on the Drawings. Erosion control mat will be measured for payment based on the surface covered in square yards by properly installed mat. Compensation will not be paid for any materials ordered and not installed.

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DRAINAGE SYSTEMS**

E. *Heavy Rock Riprap* The Contractor's unit price for KDOT 18" Light Riprap Aggregate shall include all materials and work required for installation of the KDOT 18" Light Riprap Aggregate in accordance with these Specifications and as shown on the Drawings. Measurement for payment shall be based on the tonnage of KDOT 18" Light Riprap Aggregate actually installed as determined from weigh tickets, rounded to the nearest 0.1 ton. Only material placed in accordance with the Drawings and these Specifications shall be measured and paid.

C. *Summary:* Schedule of Bid Items applicable to work covered by this Section are as follows:

<u>Bid Item</u>	<u>Unit</u>
Ditch Lining Stone	Ton
Erosion Control Mat	Square Yard
Heavy Rock Riprap	Ton

END OF SECTION 2300

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PART 1 - GENERAL

1.1 Description

A. Summary of Work

Work of this Section includes installation of silt fences and hay bale dikes to control runoff from the construction site, and temporary seeding and/or mulching of disturbed areas during periods when work is halted.

B. Related Work

Section 02100: Mobilization, Site Clearing & Preparation

Section 02200: Earthwork

Section 02300: Drainage Systems

Section 02500: Fencing

Section 02700: Seeding

1.2 Quality Assurance

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Use equipment adequate in size, capacity, and numbers to accomplish the work in a timely manner.
- C. Comply with requirements of the SMS and other governmental agencies having jurisdiction.
- D. Applicable Standards: Federal Seed Act: Rules and Regulations

1.3 Site Conditions

Temporary control measures shall be used throughout the life of the Project to prevent sediment laden discharges from construction sites.

1.4 Submittals

- A. Submit manufacturer's certifications, product data, and installation instructions for silt fence.
- B. Submit weigh and/or shipping tickets of materials delivered to the Project site for the work of this Section.
- C. Submit certificate of compliance with the Federal Seed Act, species type and pounds of pure live seed (PLS) certification, and results of germination/purity tests for all seed to be used on the project.

PART 2 - PRODUCTS

2.1 Silt Fence

- A. Geotextile fabric for silt fence, and thread for sewing fabric, shall meet or exceed the following “Minimum Average Roll Values”:

<u>Property</u>	<u>Test Method</u>	<u>Value</u>
Grab Tensile	ASTM D4632-86	100 lbs
Grab Elongation	ASTM D4632-86	20% Max
Trapezoidal Tear	ASTM D4533-85	60 lbs
Mullen Burst	ASTM D3786-87	210 lbs
UV Stability	ASTM D4355-84	90%
Water Flow Rate	ASTM D4491-85	90 gpm/sf
Permittivity	ASTM D4491-85	0.2/sec
Fabric Width	N/A	36” Min.

- B. Product shall be delivered to the site in rolls with a label affixed to the outside. Geotextile shall be stored so as not to become damaged or exposed to sunlight. Damaged or tainted fabric will not be accepted.
- C. Provide wood, steel, or synthetic posts of sufficient strength to resist damage during installation and to support the applied loads. Minimum length is to be 42 inches. Hardwood posts having dimensions of at least 1 3/16 x 1 3/16 inch, No. 2 Southern Pine at least 2 5/8 x 2 5/8 inch or steel posts of U, T, L, or C shape, weighing 1.33 lbs per foot minimum are satisfactory. No. 6 rebar or larger, or ASTM A 120 steel pipe with a minimum diameter of 3/4 inch with a minimum length of 42 inches may also be used.

2.2 Biodegradable Sediment Logs

- A. Sediment Control Device shall be Curlex Sediment Log, as manufactured by American Excelsior Company or SMS approved equal. Biodegradable Sediment Logs shall be circular in shape, having a diameter of 20” and length of 10 feet unless otherwise specified. The sediment logs consist of a weed free Great Lakes Aspen Excelsior as the inner material that is totally encased with a durable tubular polyester netting with metal clips or knotted ends. The open weave containment fabric shall be a biodegradable with 1 inch x 1 inch hexagonal openings.
- B. If erosion control blanket is to be used, the area(s) to be covered shall be graded smooth, limed, fertilized and seeded per Section 2700, Seeding, prior to installation of the blanket.

2.3 Hay Bale Dike

- A. Small rectangular hay bales for dike construction shall have approximate dimensions of 14 inches x 18 inches x 36 inches and an approximate weight of 75 pounds.

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- B. Hay bales shall be free of published noxious weeds and other weeds deemed undesirable by the SMS
- C. Stakes for anchoring bales shall be 2 inch square hardwood 48 inches long.

2.4 Temporary Mulch

- A. Mulch shall consist of wheat, oat, or rye straw. Mulch shall be air dry straw that has been properly cured and harvested. Straw harvested after a killing frost or during dormant periods will not be accepted. Mulch shall not be discolored, weathered, rotted, brittle, moldy, caked, or otherwise degraded.
- B. Mulch shall be less than 2 years old and free of published noxious weeds and other weeds deemed undesirable by the SMS.

2.5 Temporary Cover Crop

- A. All seed shall meet or exceed requirements contained in Specifications of this Section and Federal, State or County laws requiring inspection for plant disease and insect control and shall be labeled and certified in accordance with U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act. All seed shall be furnished in containers with tags showing seed mixture, purity, germination, weed content, name of seller, and date of testing. All seed shall have been tested by a certified testing laboratory within nine (9) months of the seeding date, not counting the month of the last test date.
- B. The maximum noxious weed seed shall be less than 2 percent of the species.
- C. Moldy seed or seed that has been damaged in storage shall not be used. Use previous season seed crop only.
- D. Depending on the time of year, Winter Wheat or oats shall be planted, as approved by the SMS, at the rate of 60 pounds PLS per acre.
- E. Pure Live Seed (PLS) Rate Determination
 - 1. All seeding rates are specified as pounds of pure live seed per acre (lbs. PLS/A).
 - 2.
$$\text{Pure Live Seed per pound (PLS/lb)} = \frac{\% \text{ purity} \times \% \text{ germination}}{100}$$
 - 3.
$$\text{Actual pounds of seed per acre} = \frac{\text{lbs. PLS/Ac.}}{\text{PLS/lb}}$$

PART 3 - EXECUTION

3.1 General

In general, silt fences shall be installed to protect silt caused by sheet flow over unprotected graded areas from reaching ditches or channels which leave the site. Hay bale dikes shall be installed in ditches or channels to prevent sediment laden discharges from leaving the site. Temporary cover crop and/or mulch shall be applied to disturbed areas when construction will be temporarily interrupted.

3.2 Silt Fence

- A. Silt fence shall be installed when and in locations as directed by the SMS, and shall be used primarily on graded slopes.
- B. The geotextile fabric shall be attached and keyed in on the uphill side of the posts. Fabric shall be attached to posts with staples, wire, or in accordance with manufacturer's recommendations.
- C. The geotextile shall be sewn together at all edges or an approved location as determined by the SMS, to form geotextile lengths and widths as required. Alternatively, a geotextile seam which can withstand the expected sediment load may be formed by folding the geotextile from each section over itself several times and firmly attaching the folded seam to the post.
- D. The bottom of the geotextile fabric shall be buried in a 6-inch wide trench to a minimum depth of 6 inches below the ground surface. The trench shall be backfilled and the soil tamped in place over the buried portion of the geotextile so that no flow can pass beneath the fence nor scour occur in this area.
- E. The posts shall be driven a minimum of 24 inches into the ground and shall extend above the ground a minimum of 24 inches. Posts shall be spaced 4 feet apart. Geotextile fabric shall be securely tied to each post. Geotextile fabric shall extend from in the ground to the top of the post forming a barrier 24 inches above the ground surface.
- F. Sediment deposits which accumulate behind silt fences shall be removed when the deposit reaches approximately one half the height of the fence or sooner as directed by the SMS.
- G. Maintain silt fences in good working order until approval is obtained from the SMS to remove them. After approval is obtained, remove silt fences, including posts, and dispose of off site.

3.3 Biodegradable Sediment Logs

- A. Sediment logs shall be installed to intercept water flow and collect sediment on site and shall be located as shown on the plans or as directed by the in the field by the SMS.

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TEMPORARY SEDIMENT CONTROL MEASURES

- B. Sediment logs may be installed over bare soil, or erosion control blankets, and on steep slopes. If applied over erosion control blankets the area to be covered shall be graded smooth, limed, fertilized and seeded per Section 2700, Seeding, prior to installation of the erosion control fabric.
- C. Sediment logs shall be secured to the subgrade by a 1" x 1" wood stake every two lineal feet across the length of the sediment log. The stakes shall be intertwined with the outer mesh only (on the downstream side only) and driven into the ground a minimum of 24".
- D. Maintain the Sediment logs in good working order until fully established vegetation and root systems are present and can survive on their own. Sediment logs will degrade in-place.
- E. Sediment Logs shall be installed in the swale or channel bottom allowing the installation to continue up the side slopes three feet above the anticipated high water mark and perpendicular to the flow of water.

3.4 Hay Bale Dike

- A. Hay bale dikes shall be installed when and in locations as directed by the SMS, and shall be used primarily in drainage channels.
- B. Dikes shall be installed by excavating a 6-inch deep by 14-inch wide trench. Bales shall be placed into the trench and shall be butted tightly together to provide a uniform, continuous barrier. Soil shall be tamped in place around the perimeter of the dike.
- C. Bales shall be securely anchored in place by driving 2 wooden stakes through each bale a minimum of 18 inches below the ground surface. Stakes shall be a minimum of 48 inches in length. At least one stake shall be driven at an angle to prevent bales from floating.
- D. Sediment deposits which accumulate behind hay bale dikes shall be removed when the deposit reaches approximately one half the height of the dike or sooner as directed by the SMS.
- E. Maintain hay bale dikes in good working order until approval is obtained from the SMS to remove them. After approval is obtained, remove hay bale dikes, including stakes, and dispose of off site.

3.5 Temporary Mulch

- A. Temporary mulch shall be applied to disturbed areas when and where directed by the SMS. Temporary mulch shall be used to protect graded areas prior to revegetation in the event work is halted in the area.
- B. Temporary mulch shall be spread uniformly on disturbed areas within 14 days after last disturbance. Mulch shall form a continuous blanket, applied at a rate of 2 tons per acre. Bunching or matting of mulch shall be avoided and corrected by hand methods.

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- C. Spread mulch using a blower-type mulch spreader or by hand. When spread by blower, the machine shall be operated to provide uniform distribution of mulch over the entire area. When spread by hand, material shall be torn from the bale, fluffed up, and spread uniformly
- D. After application, the mulch shall be anchored by crimping into the soil with a mulch tiller to a minimum depth of 2 inches. The mulch tiller shall be equipped with rolling coulter-type discs which shall be of sufficient diameter to prevent the frame of the mulch tiller from dragging the straw mulch. The number of passes over the mulch shall not exceed two. The straw mulch shall not be covered with excessive amounts of soil. The rows of the furrows made by the mulch tiller shall be spaced not more than 9 inches apart.
- E. All mulching operations shall be done on the contour. The spreading and anchoring shall be so scheduled and performed progressively so that wind damage will be held to a minimum. Mulching shall be started at the windward side of relatively flat areas and continued uniformly until the entire area is covered.
- F. Mulched areas which are damaged prior to or resulting from inadequate crimping of mulch shall be repaired by the Contractor at no additional expense to the Department.
- G. Temporary mulch applied to final grades shall be thoroughly disced into the top 6 inches prior to final seeding.

3.6 Temporary Seeding

- A. A temporary cover crop shall be seeded on disturbed areas when and where directed by the SMS. If so directed, temporary seeding shall be used to protect graded areas prior to revegetation in the event that work is halted in the area prior to achieving final grades.
- B. Disc the temporary seedbed only as necessary to allow sowing the seed in a uniform manner. Discing shall be done on the contour.
- C. Seed shall be applied at the rates previously described in this Section.
- D. Apply seed on the contour. Seeding procedures for temporary seeding shall be selected by the Contractor and approved by the SMS.
- E. Seeded areas which are damaged prior to or resulting from inadequate seeding operations shall be repaired by the Contractor at no additional expense to the Department.
- F. Prior to seedbed preparation for permanent cover, temporary cover plantings shall be mowed if greater than 1 foot in height prior to seed shatter. SMS may require Contractor to bale and remove baled material from the site. Any remaining plant material from temporary seeding shall be tilled under prior to seedbed preparation for permanent seeding.

3.7 Measurement and Payment

The construction cost of all work included in this Section of the Specifications shall be included in the Contractor's prices set forth in the Form of Bid for the work items described below. The unit prices for each of these items shall include its pro rata share of overhead and shall constitute full payment to the Contractor for performance of the work included in this Section of the Specifications. Payment shall be considered full compensation for all materials, tools, labor, equipment, supervision and incidentals to perform the work included in this Section of the Specifications.

Measurement and payment for each work item in this Section shall be in accordance with the following:

- A. *Silt Fence*: The unit price for this work item shall include full payment for all materials and work for installation of silt fence in accordance with these Specifications and/or as shown on the Drawings. Payment for installation of silt fence shall be at the unit price per lineal foot quoted in the Form of Bid. Payment shall be considered full compensation for all materials, tools, labor, equipment, and incidentals required for the installation and maintenance of silt fence in accordance with these Specifications.
- B. *Biodegradable Sediment Logs*: The unit price for this work item shall include full payment for all materials and work for installation of biodegradable sediment logs in accordance with these Specifications and/or as shown on the Drawings. Payment for installation of biodegradable sediment logs shall be at the unit price per lineal foot quoted in the Form of Bid. Payment shall be considered full compensation for a completed job in place.
- C. *Hay Bale Dike*: The unit price for this work item shall include all materials and work required for installation of hay bale dikes in accordance with these Specifications and/or as shown on the Drawings. Payment for installation of hay bale dikes shall be at the unit price per lineal foot quoted in the Form of Bid. Payment shall be considered full compensation for a completed job in place.
- D. *Temporary Mulch*: The unit price for this work item shall include all materials and work required for installation of temporary mulch in accordance with these Specifications. Payment for temporary mulch shall be at the unit price per acre quoted in the Form of Bid. Payment shall be considered full compensation for a completed job in place. SMS shall estimate the acreage for payment to the nearest 0.1 acre.
- E. *Temporary Seeding*: The unit price for this work item shall include all materials and work required for seeding of temporary cover crop in accordance with these Specifications. Payment for temporary seeding shall be at the unit price per acre quoted in the Form of Bid. Payment shall be considered full compensation for a completed job in place. SMS shall estimate the acreage for payment to the nearest 0.1 acre.

SECTION 02301
TEMPORARY SEDIMENT CONTROL MEASURES

F. *Summary:* Schedule of Bid Items applicable to work covered by this Section is as follows:

<u>Bid Item</u>	<u>Unit</u>
Silt Fence	Lineal Foot
Biodegradable Sediment Log	Lineal Foot
Hay Bale Dike	Lineal Foot
Temporary Mulch	Acre
Temporary Seeding	Acre

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SECTION 02500

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PART 1 - GENERAL

1.1 Description

A. Summary of Work

Furnish and install fencing and gates as shown on the Drawings and as needed to accomplish the Work in this Contract.

B. Related Work

Section 02100: Mobilization, Site Clearing & Preparation

Section 02200: Earthwork

Section 02300: Drainage Systems

Section 02301: Temporary Sediment Control Measures

Section 02700: Seeding

1.2 Quality Assurance

A. Applicable Standards

American Association of State Highway and Transportation Officials (AASHTO)

American Wood-Preservers' Association (AWPA)

Kansas Department of Transportation (KDOT)

1.3 Site Conditions

- A. Installation of some fencing will be adjacent to traveled roadways. Contractor shall provide for the safety of its crews and the public.
- B. Installation of fencing may be impacted by the location of buried utilities. Locate utilities prior to initiating work.
- C. In the course of the Work, Contractor may need to, or may opt to remove existing fencing interfering with the work. Do not relocate or dismantle until approval is obtained from the SMS. Where existing fences are removed, whether required by the Work or for Contractor's convenience, field establish such reference points and ties as are necessary to ensure replacement fencing will follow the same alignment as the existing fencing. Contractor shall maintain all existing and new fences on the Project until completion of the Work.
- D. All existing fencing which is removed but is not called out on the Drawings to be replaced with new fencing shall be replaced essentially in kind. Where the existing fencing was barbed wire, new barbed wire fencing shall be reinstalled. Where the existing fencing was woven wire, new woven wire fencing shall be reinstalled.
- E. In the event fencing is installed during or after seeding work, exercise care not to damage the seedbed area. In the event of damage, redress, reseed and remulch as applicable.

1.4 Submittals

- A. Suppliers' certifications that fencing and all incidental materials meet the indicated specifications.
- B. Shipping tickets of all materials delivered to the site for the work in this Section.

1.5 Delivery, Handling and Storage

Materials shall be delivered to the site undamaged. Materials shall be handled and stored according to manufacturer's instructions and as required to prevent damage. Damaged materials shall be replaced by the Contractor at no expense to the SMS.

PART 2 - PRODUCTS

2.1 General

Materials that are considered to be "standard products" of a manufacturer may be used when such products conform to the Specifications and/or are approved by the SMS.

2.2 Fencing

- A. Barbed wire shall be galvanized, zinc-coated meeting ASTM A121 requirements, Class 2, or aluminum coated meeting ASTM A585 requirements, two 12-1/2 gage steel wire with 4 point barbs at 5-inch centers.
- B. Smooth wire shall be galvanized, zinc-coated meeting ASTM A121 requirements, Class 2, or aluminum coated meeting ASTM A585 requirements, two 12-1/2 gage steel wire.
- C. Woven wire shall be galvanized, zinc-coated meeting ASTM A116 requirements, except the minimum weight of the zinc coating shall be 0.80 ounces per square foot and the wire shall have a minimum line wire breaking strength of 950 lbf.
- D. All wood posts and wood braces used for fencing shall comply with the latest requirements of AWPAs Standard C14 for ground contact. Wood posts shall be pressure-treated with waterborne preservatives in accordance with AWPAs Standard C2, with a retention requirement of 0.40 pcf for soil contact use under normal conditions and 60 pcf in wet or boggy conditions. Previously unused, new or seasoned hedge posts may be approved by the SMS provided hedge posts have solid ends and are of comparable dimensions as those specified herein or as shown on the Drawings.
- E. All vertical posts, except steel line posts, shall be made of wood and shall be 8 feet long. Gate posts, end posts and corner posts shall be 8 inches in diameter. For minimum diameter of all other wood posts, refer to Drawings.

- F. Steel line posts shall be "T" section high carbon steel; 1-3/8 inch by 1-3/8 inch by 7/64 inch, 1.33 lb. per foot by 7 feet long (woven wire) or 6 1/2 feet long (barbed wire) as indicated on the drawings.
- G. Horizontal braces shall be steel or wood, approximately 7 feet long. If steel is used, braces shall be 3 inch diameter, Schedule 40 galvanized steel. If wood is used, braces shall be 4" in diameter and shall comply with the requirements of B. above.
- H. Brace wire shall be 9 gage galvanized steel wire conforming to ASTM A116, Class 2, or aluminum coated.
- I. All nails, staples and clips shall be galvanized.

2.3 Backfill

- A. Backfill augered holes for fence posts with the following materials:
 - 1. Concrete, where required, shall be packaged mix or ready mix.
 - 2. Clean stone, where allowed, shall be coarse aggregate for concrete, designation CA-5, KDOT Section 1102. Concrete specified above may be used wherever clean stone is allowed.
 - 3. Excavated material, tamped in lifts. Clean stone or concrete specified above may be used wherever excavated material is allowed.

PART 3 - EXECUTION

3.1 Performance

- A. Provide two orange warning signs in both directions of traffic to warn motorists when installing fencing along roads or at any other time work is being conducted along roads.

3.2 Surface Preparation

- A. Proper support of the posts is an important aspect for the long-term integrity and performance of field fencing. Lateral soil support shall be required around all posts.
- B. Prior to installation of any posts, grade the area to provide a zone where suitable lateral support will be achieved around each post. This may require cutting and/or filling. Excess cut material shall be incorporated into the general grading of the appropriate site. Fill material required shall be obtained from the general grading of the appropriate site.
- C. The graded zone for the posts shall also be brought to proper elevation, prior to setting the posts. Grade the zone to minimize excessively steep ridges and valleys between the posts, and to achieve a functional and aesthetically pleasing final product.

- D. Lateral soil support shall be considered suitable when the soil mass into which each post is to be installed is firm, stable and solid, and when the final grades around the post will provide the following conditions:
1. Field Fence - Wooden Post: Two feet minimum clear zone of essentially level soil around the entire circumference of the post, prior to a drop-off slope.
 2. Field Fence - Steel Line Post: One foot minimum clear zone of essentially level soil around the entire circumference of the post, prior to a steep drop-off slope, except that any individual post may have a reduced zone of only 6 inches provided no two adjacent line posts have such a reduced zone.

3.3 Field Fencing

- A. New fence shall be installed to conform to the limits, alignment and finish grade indicated on the Drawings. The fence shall consist of five barbed wires with the top wire having a total height above grade of at least 4 feet.
- B. Terminal posts shall be set prior to setting line posts. Line posts shall be set equal distances apart, but not more than 13-1/2 feet apart (16-1/2 feet maximum at crossings of small depressions and waterways). All posts shall be plumb. Corner and terminal posts shall be installed wherever the change in fence alignment exceeds 10 degrees.
- C. All steel line posts shall be set by driving the post into undisturbed ground.
- D. All vertical wood posts shall be set by driving into undisturbed ground, or set into a 15-inch diameter by 3-3/4 foot deep augered hole. If driven, predrilling beyond a depth of 12 inches will not be allowed. At small depressions and waterways, and if required by the SMS, wood posts shall be set in a 15-inch diameter by 3-1/2 foot deep augered hole and installed as shown on the fencing detail drawing.
- E. If posts are driven, no backfill is required. All posts set in an augered hole shall be properly backfilled with the following materials:
1. Concrete at all gate posts and, if required by the SMS, at small depressions and waterways.
 2. Clean stone or excavated materials tamped in lifts at all other posts.
- F. Braces shall be provided for all corner posts, end posts, gate posts, changes in slope exceeding 15 degrees, points of connection to existing fence, and pull post assemblies. Corner posts shall be braced in both directions.
- G. Brace wires consist of two complete loops of wire twisted together until tight, both above and below the brace post.

- H. Barbed or smooth wire shall be drawn taut with an approved mechanical device and securely fastened to every post. The wire shall be looped around corner and terminal posts and fastened with sufficient staples to anchor the wire securely.
- I. Woven wire shall be placed by securing or fastening one end and applying sufficient tension to remove all slack before making permanent attachments elsewhere. Tension for stretching the fence shall be applied by use of mechanical fence stretchers and with single wire stretchers designed and manufactured for that purpose, and in accordance with manufacture's recommendations. Lateral wires shall be attached to end, corner and pull posts by wrapping the wires around the posts and tying the wire back on itself with not less than five twists. All splices shall be securely made, in accordance with the best practice and the fence manufacture's recommendations. Woven wire shall be fastened to steel intermediate or line posts with ties or clamps and to wood posts with staples at the bottom and top two wires and other alternate intermediate lateral wires.

3.4 Measurement and Payment

The construction cost of all work included in this Section of the Specifications shall be included in the Contractor's prices set forth in the Form of Bid for the work items described below. The unit price for each of these items shall include its pro rata share of overhead so that the sum of the products obtained by multiplying the unit prices so set forth by the amount of the work actually constructed, measured as described herein, shall constitute full payment to the Contractor for performance of the work included in this Section of the Specifications. Payment shall be considered full compensation for all materials, tools, labor, equipment, supervision and incidentals to perform the work included in this Section of the Specifications.

Measurement and payment for each work item in this Section shall be in accordance with the following:

- A. *Fencing*: The Contractor's unit price for this work item shall represent full payment for furnishing and installing fencing, in accordance with the Drawings and these Specifications. Measurement for payment shall be based on length of fencing actually installed as determined by field measurements and rounded to the nearest lineal foot.
- B. *Summary*: Bid Items applicable to work covered by this Section are as follows:

<u>Bid Item</u>	<u>Unit</u>
Field Fencing	Lineal Foot

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PART 1 - GENERAL

1.1 Description

A. Summary of Work

1. Preparation of seedbed, soil testing, liming and fertilization of seedbed, and seeding and mulching of all areas disturbed by construction.
2. If Contractor disturbs areas outside the Project Limits, such areas will also be repaired and reseeded per these Specifications, at no cost to the Department.

B. Related Work

Section 02100: Mobilization, Site Clearing & Preparation
Section 02200: Earthwork
Section 02300: Drainage Systems
Section 02301: Temporary Sediment Control Measures
Section 02500: Fencing

1.2 Quality Assurance

- A. Use adequate numbers of skilled workmen for proper performance of the work.
- B. Use equipment adequate in size, capacity, and numbers to accomplish the work in a timely manner.
- C. Comply with requirements of governmental agencies having jurisdiction and of the SMS.
- D. Applicable Standards:
Kansas Agricultural Liming Act of 1976
Kansas Commercial Fertilizer Law of 1973
Federal Seed Act: Rules and Regulations
American Standard for Nursery Stock, latest edition, American National Standards Institute, Inc.: ANSI Z60.1

1.3 Site Conditions

- A. All areas within the Project Limits and areas disturbed by construction procedures required for the completion of this Contract shall be seeded.
- B. Prior to the work of this Section, carefully inspect the work areas and verify that work of this Section may properly commence. Whenever conditions detrimental to plant growth are encountered such as rubble fill, adverse drainage conditions or obstructions, correct these conditions prior to planting.

- C. Permanent seeding shall be performed only during the seasons specified. In addition, planting operations shall not be performed during times of drought, excessive moisture, or other unfavorable climatic conditions.
- D. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

1.4 Submittals

- A. Submit certificates of fertilizer analysis by an approved laboratory or manufacturer's/vendor's certified analysis along with the supplier's name and location.
- B. Submit receipts or weigh tickets substantiating quantity of materials used on the project.
- C. Submit manufacturer's name and expiration date for inoculants.
- D. Submit certificate of compliance with the Federal Seed Act, species type and pounds of pure live seed (PLS) certification, and results of germination/purity tests for all seed to be used on the project.
- E. Submit supplier's certification of Effective Calcium Carbonate (ECC) per ton of liming material for approval by the SMS prior to initial applications.

1.5 Delivery, Handling and Storage

- A. Use all means necessary to protect materials from the elements during delivery, handling and storage.
- B. Deliver packaged materials (seed, etc.) to site in supplier's original unopened containers; each container to bear certification as specified.
- C. At no time will seed materials or inoculants be stored on site outside of the specified planting periods. Inoculants shall be stored in a cool place, away from heat. Partially used packages of inoculants shall be tightly resealed.
- D. Store packaged materials off ground and protect from moisture. Moisture damaged materials are unacceptable. Wet, moldy or otherwise damaged seed is unacceptable.
- E. Materials approved for storage on site which are being degraded must be removed and replaced at no additional cost to the Department.

1.6 Site Disturbances

- A. Take precautions to insure that equipment and vehicles do not unnecessarily disturb or damage existing grading, other site improvements, or adjacent areas to the work.
- B. Repair any damage and return site and adjacent areas disturbed by Contractor's operations to original condition at no cost to the Department.

PART 2 - PRODUCTS

2.1 Labeling and Certification

Ship all seed and other materials with certificates of inspection required by governing authorities. Comply with regulations applicable to such materials.

2.2 Agricultural Lime

Agricultural lime shall be ground calcitic limestone conforming to the current requirements of the Kansas Agricultural Liming Act. The lime shall have Effective Calcium Carbonate (ECC) of at least 50% per bulk ton of lime to be applied. Refer to KDOT Section 2105.

2.3 Fertilizer

- A. Inorganic fertilizer shall be a standard commercial product which, when applied at the proper rate, will supply the quantity of total nitrogen (N), available phosphate (P_2O_5), and soluble potash (K_2O) as specified herein.
- B. Fertilizer shall be uniform pelleted or granular and shall conform to the Kansas Commercial Fertilizer Law as amended in 1973. Any fertilizer which becomes caked or otherwise damaged, making it unsuitable for use, will not be accepted.

2.4 Legume Seed Inoculant

- A. Inoculant for treating leguminous seed shall be a pure culture of nitrogen-fixing bacteria, specific for the seed species to be inoculated. The containers shall be clearly marked with the expiration date for use and the manufacturer's directions for inoculating seed.
- B. Methods of inoculation shall conform to manufacturer's recommendations for the particular species of legume.
- C. Inoculants shall be applied at double the manufacturer's recommendation.
- D. Use sufficient inoculant to cover all seed before mixing with other seeds. Seed shall be slightly moistened or a sticker shall be used to ensure the inoculant adheres to the seed.
- E. The time lapse for sowing seed following inoculation shall not exceed 24 hours.

2.5 Seed

- A. All seed shall meet or exceed requirements contained in Specifications of this Section and Federal, State or County laws requiring inspection for plant disease and insect control and shall be labeled and certified in accordance with U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act. All seed shall be furnished in containers with tags showing seed mixture, purity, germination, weed content, name of seller, and date of testing. All seed shall have been tested by a certified testing laboratory within nine (6) months of the seeding date, not counting the month of the last test date.

- B. The maximum noxious weed seed shall be less than 2 percent of the species.
- C. Moldy seed or seed that has been damaged in storage shall not be used. Use previous season seed crop only.
- D. Seed mixtures shall consist of the following varieties, mixtures and application rates in terms of pounds of Pure Live Seed (PLS) per acre:

Fescue Seed Mix – Also for Dormant Seeding After January 1, Ground Conditions Permitting

<u>Species</u>	<u>lbs of PLS/Acre</u>
Tall Fescue (Endophyte Free)	20.0
Perennial Ryegrass	5.0
Red Clover	5.0
Smooth Brome grass	5.0
Birdsfoot Trefoil	1.0
Total PLS per acre	36.0

Native Seed Mix –Seeding After January 1 and before May15, Ground Conditions Permitting

<u>Species</u>	<u>lbs of PLS/Acre</u>
El Reno Sideoats grama	2.0
Blackwell Switch Grass	1.5
Western Wheatgrass	5.0
Kaw Big Blue Stem	1.2
Aldous or Blaze Little Bluestem	1.0
Rumsey or Osage Indiangrass	1.8
Birdsfoot Trefoil	0.5
Red River Crabgrass	1.0
Total PLS per acre	14.0

2.6 Pure Live Seed (PLS) Rate Determination

- A. All seeding rates are specified as pounds of pure live seed per acre (lbs of PLS/Acre).
- B. Pure Live Seed per pound (PLS/lb) = $\frac{\% \text{ purity} \times \% \text{ germination}}{100}$
- C. Actual pounds of seed per acre = $\frac{\text{lbs of PLS/Acre}}{\text{PLS/lb}}$

2.7 Mulch

- A. Mulch shall consist of wheat, oat or rye straw. Mulch shall be air-dried, properly cured and harvested. Straw harvested after a killing frost or during dormant periods will not be accepted. Discolored, weathered, rotted, brittle, moldy, caked or otherwise degraded material is unacceptable.
- B. Mulch shall be less than 2 years old and be free of published noxious weeds and other weeds deemed undesirable by the SMS such as Foxtail, Johnson Grass, Sericea Lespedeza, etc.
- C. Permanent mulch should not be applied to area temporarily seeded.

PART 3 - EXECUTION

3.1 Initial Site Preparation

- A. Except in the case of temporary cover crop seeding (Section 02301), required lime/mulch subgrade preparation specified in Section 02200, Earthwork, shall have been performed prior to initiating work of this Section.
- B. Prior to seedbed preparation for permanent cover, temporary cover plantings shall be mowed if greater than 1 foot in height, prior to seed shatter. SMS may require Contractor to bale and remove baled material from the site. Any remaining plant material from temporary seeding shall be tilled under prior to seedbed preparation for permanent seeding.
- C. If the site has been temporarily mulched, Contractor shall incorporate the mulch in

3.2 Seedbed Preparation

- A. Seedbed preparation applies to all areas to be seeded.
- B. Remove and dispose of clods and rocks larger than 6 inches in diameter, and other growth, debris and obstructions which could interfere with tilling, seeding or later maintenance operations.
- C. Till all areas to be seeded by discing or other approved method; thoroughly loosen and pulverize the soil to a depth of 6 inches. This may require multiple passes of the disc or other approved equipment. This entire operation shall be considered the first discing operation. Lime and fertilizer shall not be incorporated during the first discing operation.
- D. During the first discing operation, the SMS shall collect soil samples and conduct soil analysis tests to determine the application rate for agricultural lime. Fertilizer shall be also be applied at the rates indicated by these soil tests.
- E. After application of lime and fertilizer (see Item 3.3 below), redisc the site as in C above. Multiple passes may be required. This entire operation shall be considered the second discing operation.

- F. Harrow the site until the condition of the seedbed is suitable for seeding. The harrow shall be set to achieve the desired result. This may require manually resetting the teeth to a greater depth, weighting the harrow, removing extension arms on either side of the main frame, or a combination of the above. In lieu of harrowing, or if the harrow is not producing the desired result, Contractor shall redisc the area until the condition of the seedbed is suitable for seeding and this entire operation shall be considered the third discing operation.
- G. After harrowing, or the third discing operation, and prior to seed application, firm seedbed with a cultipacker or similar piece of equipment. Cultipacking shall continue until such time as a finely pulverized and firmly compacted seedbed is obtained and approved by the SMS. The seedbed shall be cultipacked again following completion of seeding to ensure adequate seed-soil contact.
- H. Maintain the seedbed until seeded and mulched to provide a smooth area with no rills or eroded areas. Contractor shall repair and restore prepared seedbed if eroded or otherwise disturbed.
- I. Seedbed preparation is prohibited when ground conditions are unsuitable due to excess moisture, snow or frost.
- J. Throughout seedbed preparation activities, discing and harrowing operations may expose rocks, boulders, or other debris. During or upon completion of each discing and harrowing operation, and prior to continuing with the next operation, remove all boulders and pick up rocks that hinder seedbed preparation or will impede seeding the site or mechanical mowing of the reclaimed site. Dispose of rocks and boulders in locations as approved by the SMS. Pick up debris, rubbish, etc. and dispose of by burying on site or hauling to an approved landfill.

3.3 Liming and Fertilizing

- A. Agricultural lime, nitrogen (N), available phosphate (P_2O_5), and soluble potash (K_2O) shall be applied to all areas to be seeded and incorporated by discing into the top 6" of the prepared seedbed.
- B. Lime and fertilizer shall be incorporated separately or simultaneously, depending upon the timing of product delivery and application. The lime may be applied and incorporated at any time prior to seeding. Once applied, it shall be incorporated within a period of time which will avoid losses due to wind or rain. The fertilizer must be applied and incorporated no more than 1 week prior to seeding. Once applied, it too shall be incorporated within a period of time which will avoid losses due to inclement weather. If lime and/or fertilizer is applied but not yet incorporated, and the SMS believes significant loss of either lime or fertilizer or both has occurred due to bad weather, Contractor shall reapply lime or fertilizer or both, as applicable, at the rates and in the areas of the site so directed by the SMS, without additional compensation.

- C. Incorporation of lime and fertilizer, whether done separately or simultaneously, shall be considered the second discing operation. Once the lime and fertilizer have both been applied and incorporated, continue seedbed preparation per Item 3.2, F through K.
- D. Agricultural lime shall be applied at the rate specified by the SMS based upon soil test results and 100% ECC as described in this Section of the Specifications. For bidding purposes, the following assumed rate of 100% ECC per acre has been used to arrive at the quantities on the Form of Bid:

100% ECC lime/acre

2 tons

- E. Nitrogen, available phosphate, soluble potash shall be applied at rates specified by the SMS based upon soil test results obtained during seed bed preparation. For bidding purposes, the following assumed rates of fertilizer per acre have been used to arrive at the quantities on the Form of Bid:

Total Nitrogen (N)

100 lbs/acre available

Available Phosphate (P_2O_5)

40 lbs/acre available

Soluble Potash (K_2O)

80 lbs/acre available

3.4 Seeding

A. General Requirements

1. As weather and site conditions permit, within the specified seeding season, seed site areas as shown on the Drawings and all other disturbed areas.
2. When conditions are such that less than satisfactory results are likely to be obtained by reason of drought, excessive moisture, or frozen soil, seeding work shall be halted as directed by the SMS and resumed only when conditions are favorable or when approved alternative or corrective measures and procedures have been effected.
3. Contractor is to proceed with complete seeding work as rapidly as portions of the site become available within seasonal limitations. In any event, seeding shall be accomplished before the prepared seedbed becomes eroded, crusted over, or dried out and shall not be conducted when the ground is frozen or snow covered.
4. Seeding shall take place as soon as practicable after final grades have been met in any area larger than 1 acre. In the event earthwork operations are interrupted for any reason for a period of more than 14 days, or the site cannot be permanently seeded because earthwork operations have been completed earlier than 14 days ahead of the next scheduled seeding season, or the Contractor opts to delay permanently seeding the site for a period of more than 14 days after completion of earthwork, protect the site with temporary sediment control measures, temporary cover crop and/or temporary mulch, all per Section 02301. In that event, follow directions of the SMS.
5. Schedule permanent seeding such that mulching of seeded area takes place no later than 24 hours after seeding partial areas. The time period between seeding and mulching shall be shortened if it appears adverse weather conditions could either cause damage to

the seeded area or delay the timely application of mulch. If, prior to mulching, the seeded area is damaged by adverse weather or success of the seeding is in doubt due to the Contractor's failure to apply mulch in a timely manner, the seedbed of the area so affected shall be repaired at no additional cost to the Department.

6. If sufficient time was available to permanently seed the site, but the specified permanent seeding dates were missed as a result of the Contractor's lack of proper scheduling and/or failure to diligently pursue the work, Contractor shall seed a temporary cover crop. Materials and execution for temporary seeding shall be as per Section 02301, however when due to Contractor's lack of proper scheduling or failure to diligently pursue the work, no payment for temporary seeding shall be made to the Contractor.
7. The SMS will not hold Contractor responsible for weather related delays or for delays resulting from circumstances beyond Contractor's control. If a temporary cover crop is required by the SMS due to circumstances beyond the Contractor's control, it shall be paid for as provided in Section 02301.

B. Seeding Season

Cool Season Grasses - January 1 through May 15
August 15 through October 15

Warm Season Grasses - January 1 through May 15

C. Seeding

1. Seed shall be applied at the rates previously described in this Section.
2. Apply seed in two passes sowing half the mixture per pass. Sow seed with the contour using a grassland or rangeland drill set for the specified seeding rates. The drill shall be equipped with double coulter furrow openers. The drill shall be subject to approval of the SMS.
3. Embed the seed not less than ¼ inch or more than ½ inch into the soil. Drill seeding shall be accomplished with drills set at no more than 6 inches apart. Overlap each successive seeding pass to insure uniform coverage with no skips. Upon a show of green, bare areas and unplanted skips shall be reseeded at no additional cost to the
4. Broadcasting by centrifugal-type or hydroseeder broadcasters, or by hand will be allowed in areas not accessible to drills or other equipment, and may be allowed for correction of bare spots and unplanted skips. Once broadcast, the seed must be covered with soil to a depth no greater than ½ inch by means of hand rakes or other approved methods.
5. Upon completion of the seeding operation, Contractor shall cultipack the seedbed to provide a positive seed-soil contact. If the drill seeder is equipped with an approved

cultipacker or press wheels, separate operations will not be necessary. The type of cultipacker/seeder to be used shall be subject to approval by the SMS.

3.5 Mulching

- A. Straw mulch shall be applied as soon as possible to all areas sown to protect against erosion.
- B. Mulch shall be spread uniformly on all seeded areas to form a continuous blanket, applied at a rate of 2 tons per acre. Bunching or matting of mulch shall be avoided and corrected by hand methods.
- C. Spread mulch using a blower-type mulch spreader or by hand. When spread by blower, the machine shall be operated to provide uniform distribution over the area. Areas not accessible by mechanical mulch spreaders shall be mulched by hand. When spread by hand, the mulch shall be torn from the bale, fluffed up, and spread uniformly over the area.
- D. After application, the mulch shall be anchored by crimping into the soil with a mulch tiller to a minimum depth of 2 inches. The mulch tiller shall be equipped with rolling coulter-type discs which shall be sufficiently dull to prevent cutting the straw mulch. The discs must be of sufficient diameter to prevent the frame of the mulch tiller from dragging the straw mulch. The number of passes over the mulch shall not exceed two. The straw mulch shall not be covered with excessive amounts of soil. The rows or furrows made by the mulch tiller shall be spaced not more than 9 inches apart.
- E. All mulching operations shall be done on the contour. The spreading and anchoring will be so scheduled and performed progressively so that wind damage will be held to a minimum.
- F. Mulched areas which are damaged by wind prior to or resulting from inadequate crimping of mulch shall be repaired by the Contractor at no additional expense to the Department.
- G. Mulching shall not be performed in areas where erosion control fabric has been or will be installed.

3.6 Maintenance

- A. Vehicular traffic on areas where finish grading is complete shall be restricted to travel necessary to establish and maintain vegetative plantings.
- B. The Contractor shall protect all seeded areas from damage of any sort due to operations of other contractors and trades. Maintenance shall commence immediately following seeding operations and shall continue through the inspection and acceptance period as per this Section of the Specifications. Contractor shall repair or replace damaged areas as directed by the SMS, at no additional cost to the Department.

3.7 Clean-up and Repairs

- A. Remove equipment, project materials, and wastes such as oil drippings, stones, gravel, packaging containers, etc., from the site and dispose of wastes at an approved off-site location.
- B. All disturbed areas including areas outside the Project Limits, such as entrance and haul roads shall be returned to their original condition.
- C. Repair all areas of rill erosion with a depth greater than 3 inches and width greater than 4 inches, or as directed by the SMS.
- D. The materials, equipment and labor for repairs are at no additional cost to the SMS.

3.8 Guarantee

The Contractor shall guarantee the seeding operation to the extent that these operations produce a “show of green” and that the materials and workmanship conform to the requirements of these specifications. In the event it is found that the work or materials do not meet the quality or application rates specified, additional work will be required at no extra cost to the Department.

3.9 Measurement and Payment

The construction cost of all work included in this Section of the Specifications shall be included in the Contractor's prices set forth in the Form of Bid for the work items described below. The lump sum or unit price for each of these several items shall include its pro rata share of overhead so that the sum of the products obtained by multiplying the unit prices so set forth by the amount of the work actually constructed, measured as described herein, shall constitute full payment to the Contractor for performance of the work included in this Section of the Specifications.

Measurement and payment for each work item in this Section shall be in accordance with the following:

- A. *Seeding and Mulching*: The Contractor's unit price per acre for Seeding and Mulching shall represent full payment for the planting of all seeded areas in accordance with requirements of this Section including the furnishing of all materials, inoculants, seedbed preparation, seeding installation, and mulching, including all required equipment and labor to complete all the work as specified herein.
- B. *Agricultural Lime - Seeding*: The Contractor's unit price for lime used in seeding work shall represent full payment for the furnishing, delivery, application and incorporation as per these Specifications. Measurement for payment purposes shall be the actual tonnage of 100% Effective Calcium Carbonate (ECC) applied by the Contractor in complying with requirements of this Section. The final application rates will be based on soil tests performed by the SMS. Submittals required under **SUBMITTALS** in this Section must accompany each shipment of agricultural lime and will form the basis for measurement and payment.

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SEEDING

- C. *Total Nitrogen (N), Available Phosphate (P₂O₅), and Soluble Potash (K₂O)*: Payment for all fertilizer furnished, delivered, applied and incorporated into seedbeds, per requirements of this Section, shall be made in accordance with the separate unit prices for Nitrogen, Phosphate and Soluble Potash set forth in the Contractor's Form of Bid. Measurement for payment purposes shall be the actual weight in pounds of each of the fertilizer components described. Submittals required under **SUBMITTALS** in this Section must accompany each shipment of fertilizer and will form the basis for measurement and payment.
- D. Summary: Schedule of Bid Items applicable to work covered by this Section are as follows:

<u>Bid Item</u>	<u>Unit</u>
Seeding and Mulching	Unit Price
Lime - Seeding	Ton (100% ECC)
Total Nitrogen (N)	Pound
Available Phosphate (P ₂ O ₅)	Pound
Soluble Potash (K ₂ O)	Pound

END OF SECTION 02700

